

United States District Court  
Northern District of California

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**UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF CALIFORNIA  
OAKLAND DIVISION**

GESTURE TECHNOLOGY PARTNERS,  
LLC

Plaintiff,

v.

APPLE, INC.

Defendant.

Case No. 4:22-cv-04806

**APPENDIX A - LETTER OF REQUEST:  
REQUEST FOR INTERNATIONAL  
JUDICIAL ASSISTANCE PURSUANT  
TO THE HAGUE CONVENTION OF 18  
MARCH 1970 ON THE TAKING OF  
EVIDENCE ABROAD IN CIVIL OR  
COMMERCIAL MATTERS**

GREETINGS:

The United State District Court, Northern District of California (“Requesting Court”) respectfully requests international judicial assistance to documentary and testimony evidence from a non-party entity, Crunchfish AB (“Crunchfish”), located in Stockholm, Sweden, on the topics set forth in Schedule B, and to obtain the production of documents from Crunchfish set forth in Schedule A. The requested testimony and documents are to be used in a civil action proceeding

before the Requesting Court. The Requesting Court requests the assistance described herein as necessary in the interests of justice:

Requirement of the Letter of Request	Response
Specification of the date by which the requesting authority requires receipt of the response to the Letter of Request	To allow the parties sufficient time to analyze the requested documents and testimony for their use at trial and in pretrial filings, a response to the Letter Rogatory is requested by March 14, 2025, or as soon thereafter as is reasonably possible.
In conformity with Article 3 of the Hague Convention on the Taking of Evidence Abroad in Civil or Commercial Matters ("Hague Convention"), Federal Rule of Civil Procedure 28(b), and 28 U.S.C.A. 1781(b), the undersigned authority respectfully has the honor to submit the following request: Requesting Judicial Authority (Article 3, a)	The Honorable Laurel Beeler, Magistrate Judge, United States District Court for the Northern District of California, San Francisco Courthouse, Courtroom B – 15th Floor, 450 Golden Gate Ave., San Francisco, CA 94102
To the competent Authority of (Article 3, a)	Sweden
Names of the case and any identifying number	<i>Gesture Technology Partners LLC v. Apple, Inc.</i> , Case No. 4:22-cv-04806-YGR (N.D. Cal.)
Plaintiff	Gesture Technology Partners, LLC
Representatives	Fred I. Williams (admitted <i>pro hac vice</i> ) Texas State Bar No. 00794855 Eric Carr (SBN 333128) WILLIAMS SIMONS & LANDIS PLLC The Littlefield Building 601 Congress Ave., Suite 600 Austin, TX 78701 Tel: 512-543-1354 fwilliams@wsltrial.com ecarr@wsltrial.com  John Wittenzellner (admitted <i>pro hac vice</i> ) WILLIAMS SIMONS & LANDIS PLLC 1735 Market Street, Suite 125 #453 Philadelphia, PA 19103 Tel: 512-543-1373 johnw@wsltrial.com
Defendant	Apple, Inc

1	Representatives	Michael D. Jay (SBN 223827) Michael.jay@us.dlapiper.com DLA PIPER LLP (US) 2000 Avenue of the Stars, Suite 400 North Tower Los Angeles, CA 90067 Tel: 310.595.3000
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5		Sean Cunningham (SBN 174931) sean.cunningham@us.dlapiper.com Catherine Huang (SBN 299696) Catherine.huang@us.dlapiper.com DLA PIPER LLP (US) 401 B Street, Suite 1700 San Diego, California 92101-4297 Tel: 619.699.2700
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10	Other parties	Crunchfish AB Stora Varvsgatan 6A 211 19 Malmö Sweden Phone: +46 40 626 77 00 E-mail: info@crunchfish.com
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13	Nature of the proceedings (divorce, paternity, breach of contract, product liability, etc.) (Article 3, c)	Civil action alleging patent infringement under the patent laws of the United States.
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15	Summary of complaint	This case is styled <i>Gesture Technology Partners LLC v. Apple, Inc.</i> , Case No. 4:22- cv-04806-YGR (N.D. Cal.) (“U.S. Action”).
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17		After Gesture Technology Partners LLC, (“GTP”) sued Apple, Inc. (“Apple”) for infringing several patents that are purportedly owned by GTP, Apple responded by denying infringement and providing invalidity contentions for the patents they were accused of infringing.
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22		The patent at issue is U.S. Patent No. 8,878,949 (“the ’949 Patent”). The ’949 patent is present and all elements of claim 4 are either literally satisfied or satisfied under the doctrine of equivalents by Apple and third parties on Apple’s App store, such as Crunchfish AB.
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27	Summary of defense and counterclaim	In defense against GTP’s claims of patent infringement of the ’949 patent, Apple asserts, <i>inter alia</i> , that the claims of these
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1		patents are invalid. For instance, Apple contends that claim 4 of the '949 patent was known or obvious to those of ordinary skill in the art, and disclosed by systems or apparatuses that were publicly available prior to '949's priority date.
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4	Other necessary information or documents	A Protective Order governing the production and disclosure of confidential information in connection with this legal proceeding is attached to Schedules A and B as <b>Attachment 1</b> . Thus, any confidential documents or testimony provided in this proceeding would be protected from disclosure to the public pursuant to the terms of the Protective Order.
5		Plaintiff's Disclosure of Supplemental Asserted Claims and Infringement Contentions is attached to Schedules A and B as <b>Attachment 2</b> .
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12	Evidence to be obtained or other judicial act to be performed (Article 3d)	In order to present its contentions that Apple and Crunchfish infringe the '949 patent, GTP seeks certain documents and testimony from Crunchfish that are described fully in the attached <b>Schedules A and B</b> . This Court has determined that there are sufficient grounds to obtain testimonial and documentary evidence sought through this Letter of Request, from Crunchfish, as the evidence sought is directly relevant to the issues to be determined by this Court, and such evidence cannot be secured elsewhere or otherwise without the intervention of the appropriate judicial authorities in Sweden.
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21		As Crunchfish AB is outside the subpoena power of this Court and cannot be subpoenaed to appear as a witness in this case, the testimony and documents sought in this Letter of Request will be used in this case, including at any trial.
22		The requested documents and testimony described in detail in <b>Schedules A and B</b> are relevant to GTP LLC's infringement contentions. Crunchfish AB has knowledge of the facts relevant to GTP's infringement contentions. For instance, Crunchfish
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	displays two apps, GoCam and MOMAX, that integrate the '949 patents technology prior to the patents expiration date of May 11, 2020. The documents and testimony in <b>Schedules A and B</b> are directed to these narrowly tailored issues.
Identity and address of any person to be examined (Article 3, e)	Crunchfish AB Stora Varvsgatan 6A 211 19 Malmö Sweden Phone: +46 40 626 77 00 E-mail: <a href="mailto:info@crunchfish.com">info@crunchfish.com</a>
Questions to be put to the persons to be examined or statement of the subject matter about which they are to be examined (Article 3, f)	<b>See Schedule B</b>
Documents or other property to be inspected (Article 3, g)	<b>See Schedule A</b>
Any requirement that the evidence be given on oath or affirmation and any special form to be used (Article 3, h)	This Court respectfully requests that the examination be conducted under oath.
Special methods or procedure to be followed (e.g., oral or in writing, verbatim, transcript or summary, cross-examination, etc.) (Article 3, i) and 9)	<p>This Court respectfully requests that Central Authority direct a representative of Crunchfish AB to appear on or before September 30, 2024.</p> <p>This Court further respectfully requests that:</p> <p>(1) the examination be taken orally; (2) the examination be taken before a stenographer and videographer selected by Gesture Technology Partners, LLC; (3) the videographer be permitted to record the examination by audiovisual means; (4) the stenographer be allowed to record a verbatim transcript of the examination; (5) the examination be conducted in English, or, if necessary, with the assistance of an interpreter selected by Gesture Technology Partners, LLC; (6) if the examination is conducted through an interpreter, verbatim transcripts of the proceeding in both English and Swedish may be permitted; (7) the witness be examined for no more than seven hours of testimony; (8) the witness be examined as soon as possible; and (9) the above-mentioned U.S. counsel for Apple and</p>

	<p>Crunchfish, and Swedish counsel retained by the parties, be permitted to participate in the examinations, by attending the testimony of the witnesses either in person or by video link and be permitted to examine and cross-examine the witnesses. In the event that the evidence cannot be taken according to some or all of the procedures described above, this Court requests that it be taken in such manner as provided by the laws of Sweden for the formal taking of testimonial evidence. Costs incurred in relation to the deposition examination (court reporter, video recorder, simultaneous translation) shall be at Gesture Technology Partners, LLC's expense.</p> <p>This Court also requests that Crunchfish AB produce the documents listed in <b>Schedule A</b> to this Letter of Request at least fifteen days prior to the Crunchfish examination.</p>
<p>Request for notification of the time and place for the execution of the Request and identity and address of any person to be notified (Article 7)</p>	<p>This Court respectfully requests that you notify this Court; the representatives of the parties as indicated above; the witness from whom evidence is requested as indicated above; and such other person(s) that you deem proper.</p>
<p>Request for attendance or participation of judicial personnel of the requesting authority at the execution of the Letter of Request (Article 8)</p>	<p>No judicial personnel of the requesting authority will attend or participate.</p>
<p>Specification of privilege or duty to refuse to give evidence under the law of the State of origin (Article 11, b)</p>	<p>Under the laws of the United States, a witness has a privilege to refuse to give evidence if to do so would disclose a confidential communication between the witness and his or her attorney that was communicated specifically for the purpose of obtaining legal advice and which privilege has not been waived. United States law also recognizes a privilege against criminal self-incrimination. Other limited privileges on grounds not applicable here also exist, such as communications between doctors and patients, husband and wife, and clergy and penitent. Certain limited immunities are also recognized outside the strict definition of privilege, such as the limited protection of work product created by attorneys during or in anticipation of litigation.</p>

The fees and costs incurred which are reimbursable under the second paragraph of Article 14 or under Article 26 of the Convention will be borne by

Gesture Technology Partners, LLC will bear the reimbursable costs associated with this request in accordance with the provisions of the Hague Convention.

Date of Request:

Signature and Seal of Requesting Authority:

Honorable Laurel Beeler  
Magistrate Judge  
United States District Court  
Northern District of California

United States District Court  
Northern District of California

United States District Court  
Northern District of California

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# Schedules A and B

**DEFINITIONS**

1. Schedules A and B below are subject to and incorporate the following definitions and instructions, regardless of whether upper or lower case letters are used:

2. “Crunchfish” “You,” or “Your” means Crunchfish AB, including its agents, officers, directors, employees, consultants, representatives, attorneys, predecessors and successors in interest, subsidiaries, affiliates, parents, divisions, joint ventures, licensees, franchisees, assigns, members and related entities, and any other legal entities, whether foreign or domestic that are owned or controlled by Crunchfish, and all predecessors and successors in interest to such entities, and any entity owned in whole or in part by, affiliated with, or controlled in whole or in part by Crunchfish as well as the agents, officers, directors, employees, consultants, representatives and attorneys of any such entities.

3. “Apple” means Apple Inc., including its agents, officers, directors, employees, consultants, representatives, attorneys, predecessors and successors in interest, subsidiaries, affiliates, parents, divisions, joint ventures, licensees, franchisees, assigns, members and related entities, and any other legal entities, whether foreign or domestic that are owned or controlled by Apple, and all predecessors and successors in interest to such entities, and any entity owned in whole or in part by, affiliated with, or controlled in whole or in part by Apple as well as the agents, officers, directors, employees, consultants, representatives and attorneys of any such entities.

4. “’949 Patent” shall mean United States Patent No. 8,878,949 and any related patents or applications.

5. The term “Patent-in-Suit” or “Asserted Patent” means the ’949 patent.

6. The term “Asserted Claim” means claim 4 of the ’949 Patent which depends from claim 1 of the ’949 Patent.

7. The term “Lawsuit” means GESTURE TECHNOLOGY PARTNERS, LLC, v. APPLE, INC., case no. 4:22-cv-04806-YGR in the Northern District of California, as well its predecessor case, GESTURE TECHNOLOGY PARTNERS, LLC, v. APPLE INC., case no 6:21-cv-00121-ADA in the Eastern District of Texas.

8. The term “Accused Products” means all of Apple’s mobile devices, handheld devices, mobile phones, cellular phones, smartphones, and tablets accused of infringing or relating to the infringement of any claim of the Patent-in-Suit, including Apple iPhone 6s, Apple iPhone 6s Plus, Apple iPhone SE, Apple iPhone 7, Apple iPhone 7 Plus, Apple iPhone 8, Apple iPhone 8 Plus, Apple iPhone X, Apple iPhone XR, Apple iPhone XS, Apple iPhone XS Max, Apple iPhone 11, Apple iPhone 11 Pro, Apple iPhone 11 Pro Max, Apple iPhone SE (2nd Generation), Apple iPhone 12, Apple iPhone 12 mini, Apple iPhone 12 Pro, Apple iPhone 12 Pro Max, Apple iPad mini 4, Apple iPad Pro 12.9-inch (2015), Apple iPad Pro 9.7-inch (2016), Apple iPad 9.7-inch (5th Generation), Apple iPad Pro 10.5-inch (2017), Apple iPad Pro 12.9-inch (2nd Generation), Apple iPad 9.7-inch (6th Generation), Apple iPad Pro 11-inch (1st Generation), Apple iPad Pro 12.9-inch (3rd Generation), Apple iPad Air (3rd Generation), Apple iPad mini (5th Generation), Apple iPad (7th Generation), Apple iPad Pro 11 (2nd Generation), Apple iPad Pro 12.9 (4th Generation), Apple iPad 10.2-inch (8th Generation), and Apple iPad Air (4th Generation). *See* Attachment 2, Plaintiff’s Disclosure of Supplemental Asserted Claims and Infringement Contentions.

9. The term “Camera” means any device for recording visual images, including, for example, but not limited to, charge-coupled device sensors and CMOS image sensors.

10. The term “Sensor” means any device that detects the state, events, or changes in the environment, including, for example, but not limited to electromagnetic radiation (e.g., visible light, infrared light, or ultraviolet light).

11. The term “Components” means all Cameras, Sensors, and processors or systems-on-chips that are part of the Accused Products.

12. The term “Gesture” means movement, position, or state of a body part, including, but not limited to, the whole body, any part thereof, and facial expressions.

13. The term “Crunchfish Application” or “Crunchfish Applications” means any software application made or supplied by Crunchfish that runs on the Accused Products that: (1) is the either the Crunchfish GoCam or MOMAX cam applications downloadable in the Apple App Store, or (2) uses data (such as image data) from one or more Cameras or Sensors, for determining

1 Gestures. Such software applications include, but are not limited to, user applications including  
2 all versions of the GoCam and MOMAX cam user application downloadable in the Apple App  
3 Store, application programming interfaces (API), firmware, drivers, operating-system components,  
4 and the like.

5 14. The term “Relevant Time Period” means the time period beginning February 1,  
6 2015, through May 31, 2020. The term “Relevant Time Period” in no way limits or modifies any  
7 period of time that is otherwise expressly stated or identified in any request herein.

8 15. All terms used herein that are capitalized, either initially or in their entirety, shall  
9 be construed as if they appeared in lower case letters, as may be necessary to bring within the  
10 scope of these Interrogatories all responses that might otherwise be construed to be outside its  
11 scope.

12 16. The terms “all” and “each” shall be construed either disjunctively or conjunctively  
13 as necessary to bring within the scope of the discovery request all responses that might otherwise  
14 be construed to be outside of its scope.

15 17. The connectives “and” and “or” shall be construed either disjunctively or  
16 conjunctively as necessary to bring within the scope of the document request all productions that  
17 might otherwise be construed to be outside of its scope.

18 18. The singular form of a word should be interpreted as plural, and the plural form of a  
19 word shall be interpreted as singular, whenever appropriate, in order to bring within the scope of  
20 the request any information that might otherwise be considered beyond its scope. Any pronoun  
21 shall be construed to refer to the masculine, feminine, or neuter gender as in each case is most  
22 appropriate.

23 19. The term “person” or “entity” refers to natural persons, groups of natural persons,  
24 corporations, partnerships, joint ventures, firms, and any other incorporated or unincorporated  
25 entity.

26 20. The term “Concerning” as used herein shall mean, in whole or in any part,  
27 discussing, mentioning, alluding to, responding to, relating to, in connection with, involving,  
28 commenting on, in respect of, about, associated with, evidencing, reflecting, showing, describing,

analyzing, summarizing, memorializing, consisting of, constituting, identifying, stating, tending to support, tending to discredit, referring to, and/or in any way touching upon.

21. When identifying a person, the terms “Identify” and “Identification” mean to give, to the extent known, the individual’s full name, present or last known business address and principal place of business. If the entity is a natural person, these terms include the individual’s last known location and place of employment, if known, including the person’s last known occupation, position or job title.

22. With respect to documents, the terms “Identify” and “Identification” mean to give, to the extent known, the (i) type of document; (ii) general subject matter; (iii) the date of the document; (iv) the author(s) including their names, addresses and positions, addressee(s) including their names, addresses and positions and recipient(s) and distributees, including their names, addresses and positions; and (v) whether the document specified is in Defendant’s possession, custody or control.

23. The term “Communication(s)” means: (i) the transmittal of information (in the form of facts, ideas, inquiries or otherwise); and (ii) any transfer of information of any nature whatsoever, whether by oral, written, electronic, or other means.

24. With respect to an event or communication, the terms “Identify” and “Identification” mean to state the date the communication or event occurred, the names of the individual(s) present, with notes indicating those actually participating, the location where the event or communication occurred, and a concise description of the event or the subject matter of the communication.

25. The term “Identify” with reference to individuals shall mean to state the name, any known business title, current or last known residential address, current or last known business address, and current or last known telephone number.

26. The term “Identify” with reference to entities shall mean to state the full legal name of the entity, the place of incorporation or organization, the principal place of business, and the nature of the business conducted by that legal entity.

27. The term “Describe,” and “Description,” shall mean to give a complete, fulsome,



1 and detailed account of the content of a Communication, event, or thing, including without  
2 limitation an Identification of the five individuals most knowledgeable about the described subject  
3 matter.

4 28. The term “Document(s)” is defined to be synonymous in meaning and equal in  
5 scope to the usage of this term in Rule 34(a) of the Federal Rules of Civil Procedure and includes,  
6 without limitation, any written, types, printed, recorded, electronic, or computer-stored material,  
7 whether in draft or final form, and each non-identical copy or otherwise, and includes, without  
8 limitation, contracts, checks, records of wire transfers, financial statements, invoices, ledgers,  
9 reports of any nature, memoranda, correspondence, note pads, notices, minutes and notes of  
10 meetings, records of discussions and conversations, diaries, calendars, charts, lists, journals,  
11 electronically-stored or generated information (including computer records, computer runs,  
12 computer disks, electronic mail, and PDA files), tape recordings, microfilm, microfiche, and any  
13 other data compilations from which information can be obtained, translated, or deciphered, or any  
14 other tangible thing containing writings. A draft or non-identical copy, including an otherwise  
15 identical copy but for handwritten matter, is a separate document within the meaning of this term.

16 29. The terms “Describe” and “Description” shall mean, when used in relation to an  
17 act, event, instance, occasion, methodology, system, transaction, conversation, or communication, a  
18 complete description including, without limitation: (1) a statement of the date and place thereof,  
19 including a description of when, how, why, and by whom such event, action, or thing was planned,  
20 created, occurred, changed, operates, and/or was completed; (2) an identification of the individual  
21 participants, creators, or actors, as applicable; (3) a separate summary for each individual  
22 participant identifying their respective role and/or stating what was said or done; (4) an  
23 identification of each document used, collected, referenced, created, or prepared in connection  
24 therewith or making any reference thereto, including the source of their content.

25 30. The term “Supplier” shall mean any entity providing You with Accused Products.

26 31. The term “Date” shall mean the exact date, if known, or the closest approximation  
27 to the exact date as can be specified, including without limitation, the year, month, week in a  
28 month, or part of a month.

32. The use of the present tense shall be construed to include the past tense, and vice versa, so as to make the request inclusive rather than exclusive.

### INSTRUCTIONS

1. Produce all responsive Documents, electronically stored information, and things in Your possession, custody, or control, wherever located, in the manner in which they are maintained.

2. In answering these Requests, even though the request might be directed to “You” or “Your,” furnish all information which is available to You including, but not limited to, the information in Your possession, or in the possession of Your attorneys or investigators working for Your attorneys, or in the possession of Your consultants or accountants, and not merely such information as is within Your own knowledge.

3. State, for each request, whether or not there exist any Documents within the scope of the request and whether any such Documents are in Your possession, custody, or control.

4. If any Document is withheld from production on the basis of privilege, immunity, or any similar claim, please specify: (i) the date of the Document; (ii) the subject matter of the Document; (iii) the type of Document (memorandum, pamphlet, report, etc.); (iv) such other information as is sufficient to identify the Document, Including, where appropriate, the author, addressee, and any other recipient of the Document, and where not apparent, the relationship of the author, addressee, and any other recipient to each other; and (v) an explanation of the basis for withholding the Document.

5. If You object to the scope or breadth of any request, respond within the scope or breadth of production that You contend is proper, and define the scope or breadth in which You have responded.

6. Please include a unique production number with each document produced by you in response to these requests. You may designate documents confidential pursuant to the Protective Order attached as **Attachment 1**.

**SCHEDULE A**

**REQUESTED DOCUMENTS**

**Request No. 1**

All Documents, including source code, the functionality of Crunchfish Applications, including how Crunchfish Applications interface with Components, such as Camera(s) and Sensor(s), on Apple Accused Products.

**Request No. 2**

All Documents, including source code, pertaining to features on Crunchfish Applications that use one or more Cameras, or data from one or more Cameras, including the Crunchfish GoCam and MOMAX cam applications.

**Request No. 3**

All Documents, including source code, pertaining to or discussing Gestures in relation to functionality in Crunchfish Applications, such as Documents pertaining to or discussing Gestures for use by one or more Crunchfish Applications.

**Request No. 4**

All Documents, including source code, relating to the analysis or recognition of Gestures on any of the Accused Products.

**Request No. 5**

Technical specifications and documentation for Crunchfish Applications.

**Request No. 6**

Documents sufficient to identify how You configured, implemented, and used Crunchfish Applications during the Relevant Time Period.

**Request No. 7**

Documents sufficient to show the individuals involved in or contributing to the conception, design, development, and implementation of Crunchfish Applications on either Apple Accused Products or Apple iOS.

**Request No. 8**

Documents sufficient to show how Crunchfish Applications have evolved over time during the Relevant Time Period.

**Request No. 9**

All Documents related to or showing revenue and expenditures associated with Crunchfish Applications.

**Request No. 10**

All Documents concerning any praise or acclaim for any functionality of Crunchfish Applications.

**Request No. 11**

All Documents, Communications, and things related to Your efforts to commercialize Crunchfish Applications.

**Request No. 12**

All Documents related to any agreements relating to Apple or the Apple App Store.

**SCHEDULE B**

**TOPICS OF EXAMINATION**

**TOPIC NO. 1**

Your search for and collection of Documents responsive to this subpoena.

**TOPIC NO. 2**

The three individuals most knowledgeable about the Documents responsive to each topic of this subpoena.

**TOPIC NO. 3**

The content of Documents used or referenced by You to prepare any witness to testify on any Topic listed herein.

**TOPIC NO. 4**

All Documents produced by You in response to this subpoena.

**TOPIC NO. 5**

The functionality of Crunchfish Applications, including how Crunchfish Applications interface with Components, such as Camera(s) and Sensor(s), on Apple Accused Products.

**TOPIC NO. 6**

The source code of Crunchfish Applications, including the source code related to Crunchfish GoCam and MOMAX cam applications, and source code related to functionalities that use a Camera to capture an image or video.

**TOPIC NO. 7**

All Documents, Communications, and things Apple provided to you regarding either Crunchfish Applications or the Apple App Store.

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**TOPIC NO. 8**

Your revenue and expenditures on a month-by-month, quarterly, and annual basis during the Relevant Time Period.

**TOPIC NO. 9**

Communications between You, Apple, and/or any third-party regarding the Lawsuit.

**TOPIC NO. 10**

Your integration of Crunchfish Applications with Apple iOS, your integration of Crunchfish Applications with Apple Accused Products, and your integration of Crunchfish Applications with the Apple App Store.

United States District Court  
Northern District of California

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# ATTACHMENT 1

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**UNITED STATES DISTRICT COURT**  
**NORTHERN DISTRICT OF CALIFORNIA**

GESTURE TECHNOLOGY PARTNERS,  
LLC,

Plaintiff,

v.

APPLE INC.,

Defendant.

Case No. 4:22-CV-04806-YGR

**STIPULATED PROTECTIVE ORDER  
FOR LITIGATION INVOLVING  
PATENTS**



1 Plaintiff Gesture Technology Partners, LLC (“Plaintiff”) and Defendant Apple Inc.  
2 (“Defendant”) anticipate that documents, testimony, or information containing or reflecting  
3 confidential, proprietary, trade secret, and/or commercially sensitive information are likely to  
4 be disclosed or produced during the course of discovery, initial disclosures, and supplemental  
5 disclosures in this case and request that the Court enter this Order setting forth the conditions  
6 for treating, obtaining, and using such information.

7 Pursuant to Rule 26(c) of the Federal Rules of Civil Procedure, the Court finds  
8 good cause for the following Agreed Protective Order Regarding the Disclosure and Use of  
9 Discovery Materials (“Order” or “Protective Order”).

10 1. **PURPOSES AND LIMITATIONS**

11 (a) Protected Material designated under the terms of this Protective Order shall  
12 be used by a Receiving Party solely for this case, and shall not be used directly or indirectly for  
13 any other purpose whatsoever.

14 (b) The Parties acknowledge that this Order does not confer blanket protections  
15 on all disclosures during discovery, or in the course of making initial or supplemental disclosures  
16 under Rule 26(a). Designations under this Order shall be made with care and shall not be made  
17 absent a good faith belief that the designated material satisfies the criteria set forth below. If it  
18 comes to a Producing Party’s attention that designated material does not qualify for protection at  
19 all, or does not qualify for the level of protection initially asserted, the Producing Party must  
20 promptly notify all other Parties that it is withdrawing or changing the designation.

21 2. **DEFINITIONS**

22 (a) “Discovery Material” means all items or information, including from any  
23 non-party, regardless of the medium or manner generated, stored, or maintained (including, among  
24 other things, testimony, transcripts, or tangible things) that are produced, disclosed, or generated  
25 in connection with discovery or Rule 26(a) disclosures in this case.

26 (b) “Outside Counsel” means (i) outside counsel who appear on the pleadings  
27 as counsel for a Party and (ii) partners, associates, and staff of such counsel to whom it is  
28 reasonably necessary to disclose the information for this litigation.

(c) “Patents-in-suit” means U.S. Patent Nos. 8,878,949, 8,194,924, 7,933,431, and 8,553,079, and any other patent asserted in this action, as well as any related patents, patent applications, provisional patent applications, continuations, and/or divisionals.

(d) “Party” means any party to this case, including all of its officers, directors, employees, consultants, retained experts, and outside counsel and their support staffs.

(e) “Producing Party” means any Party or non-party that discloses or produces any Discovery Material in this case.

(f) “Protected Material” means any Discovery Material that is designated as “CONFIDENTIAL,” “CONFIDENTIAL - ATTORNEYS’ EYES ONLY,” or “CONFIDENTIAL - OUTSIDE ATTORNEYS’ EYES ONLY - SOURCE CODE,” as provided for in this Order. Protected Material shall not include: (i) advertising materials that have been actually published or publicly disseminated; and (ii) materials that show on their face they have been disseminated to the public.

(g) “Receiving Party” means any Party who receives Discovery Material from a Producing Party.

(h) “Source Code” means computer code, scripts, assembly, binaries, object code, source code listings (e.g., file names and path structure), descriptions of source code (e.g., descriptions of declarations, functions, and parameters), object code listings and descriptions of object code, Hardware Description Language (HDL) or Register Transfer Level (RTL) files that describe the hardware design of any ASIC or other chip, and Computer Aided Design (CAD) files that describe the hardware design of any component.

3. **COMPUTATION OF TIME**

The computation of any period of time prescribed or allowed by this Order shall be governed by the provisions for computing time set forth in Federal Rules of Civil Procedure 6.

4. **SCOPE**

(a) The protections conferred by this Order cover not only Discovery Material governed by this Order as addressed herein, but also any information copied or extracted

therefrom, as well as all copies, excerpts, summaries, or compilations thereof, plus testimony, conversations, or presentations by Parties or their counsel in court or in other settings that might reveal Protected Material.

(b) Nothing in this Protective Order shall prevent or restrict a Producing Party's own disclosure or use of its own Protected Material for any purpose, and nothing in this Order shall preclude any Producing Party from showing its Protected Material to an individual who prepared the Protected Material.

(c) Nothing in this Order shall be construed to prejudice any Party's right to use any Protected Material in court or in any court filing with the consent of the Producing Party or by order of the Court.

(d) This Order is without prejudice to the right of any Party to seek further or additional protection of any Discovery Material or to modify this Order in any way, including, without limitation, an order that certain matter not be produced at all.

5. **DURATION**

Even after the termination of this case, the confidentiality obligations imposed by this Order shall remain in effect until a Producing Party agrees otherwise in writing or a court order otherwise directs.

6. **ACCESS TO AND USE OF PROTECTED MATERIAL**

(a) Basic Principles. All Protected Material shall be used solely for this case or any related appellate proceeding, and not for any other purpose whatsoever, including without limitation any other litigation, patent prosecution or acquisition, patent reexamination or reissue proceedings, or any business or competitive purpose or function. Protected Material shall not be distributed, disclosed or made available to anyone except as expressly provided in this Order.

(b) Patent Prosecution Bar. Absent the written consent of the Producing Party, any person on behalf of the Plaintiff who receives one or more items designated "CONFIDENTIAL – ATTORNEYS' EYES ONLY" or "CONFIDENTIAL – ATTORNEYS' EYES ONLY – SOURCE CODE" by a Defendant shall not be involved, directly or indirectly, in any of the following activities: (i) advising on, consulting on, preparing, prosecuting, drafting,

1 editing, and/or amending of patent applications, specifications, claims, and/or responses to office  
2 actions, or otherwise affecting the scope of claims in patents or patent applications relating to the  
3 functionality, operation, and design of image capture technology based on the determination of  
4 gestures (generally or as described in any patent in suit), before any foreign or domestic agency,  
5 including the United States Patent and Trademark Office; and (ii) the acquisition of patents  
6 (including patent applications), or the rights to any such patents or patent applications with the  
7 right to sublicense, relating to the functionality, operation, and design of image capture technology  
8 based on the determination of gestures. These prohibitions are not intended to and shall not  
9 preclude counsel from participating in proceedings on behalf of a Party challenging the validity of  
10 any patent, but are intended, inter alia, to preclude counsel from participating directly or indirectly  
11 in reexamination, inter partes review, covered business method review, or reissue proceedings on  
12 behalf of a patentee. These prohibitions shall begin when access to “CONFIDENTIAL –  
13 ATTORNEYS’ EYES ONLY” or “CONFIDENTIAL – ATTORNEYS’ EYES ONLY –  
14 SOURCE CODE” materials are first received by the affected individual, and shall end two (2)  
15 years after the final resolution of this action, including all appeals.

16 (c) Secure Storage, No Export. Protected Material must be stored and  
17 maintained by a Receiving Party at a location in the United States and in a secure manner that  
18 ensures that access is limited to the persons authorized under this Order. To ensure compliance  
19 with applicable United States Export Administration Regulations, Protected Material may not be  
20 exported outside the United States.

21 (d) Legal Advice Based on Protected Material. Nothing in this Protective Order  
22 shall be construed to prevent counsel from advising their clients with respect to this case based in  
23 whole or in part upon Protected Materials, provided counsel does not disclose the Protected  
24 Material itself except as provided in this Order.

25 (e) Limitations. Nothing in this Order shall restrict in any way a Producing  
26 Party’s use or disclosure of its own Protected Material. Nothing in this Order shall restrict in any  
27 way the use or disclosure of Discovery Material by a Receiving Party: (i) that is or has become  
28 publicly known through no fault of the Receiving Party; (ii) that is lawfully acquired by or known

1 to the Receiving Party independent of the Producing Party; (iii) previously produced, disclosed  
2 and/or provided by the Producing Party to the Receiving Party or a non-party without an  
3 obligation of confidentiality and not by inadvertence or mistake; (iv) with the consent of the  
4 Producing Party; or (v) pursuant to order of the Court.

5 7. **DESIGNATING PROTECTED MATERIAL**

6 (a) Available Designations. Any Producing Party may designate Discovery  
7 Material with any of the following designations, provided that it meets the requirements for such  
8 designations as provided for herein: “CONFIDENTIAL,” “CONFIDENTIAL - ATTORNEYS’  
9 EYES ONLY,” or “CONFIDENTIAL – OUTSIDE ATTORNEYS’ EYES ONLY - SOURCE  
10 CODE.”

11 (b) Written Discovery and Documents and Tangible Things. Written  
12 discovery, documents (which include “electronically stored information,” as that phrase is used in  
13 Federal Rule of Procedure 34), and tangible things that meet the requirements for the  
14 confidentiality designations listed in Paragraph 7(a) may be so designated by placing the  
15 appropriate designation on every page of the written material prior to production. For digital files  
16 being produced, the Producing Party may mark each viewable page or image with the appropriate  
17 designation, and mark the medium, container, and/or communication in which the digital files  
18 were contained. In the event that original documents are produced for inspection, the original  
19 documents shall be presumed “CONFIDENTIAL – ATTORNEYS’ EYES ONLY” during the  
20 inspection and re-designated, as appropriate during the copying process.

21 (c) Native Files. Where electronic files and documents are produced in native  
22 electronic format, such electronic files and documents shall be designated for protection under this  
23 Order by appending to the file names or designators information indicating whether the file  
24 contains “CONFIDENTIAL,” “CONFIDENTIAL - ATTORNEYS’ EYES ONLY,” or  
25 “CONFIDENTIAL - OUTSIDE ATTORNEYS’ EYES ONLY - SOURCE CODE,” material, or  
26 shall use any other reasonable method for so designating Protected Materials produced in  
27 electronic format. When electronic files or documents are printed for use at deposition, in a court  
28 proceeding, or for provision in printed form to an expert or consultant pre-approved pursuant to

1 paragraphs 8-10, the party printing the electronic files or documents shall affix a legend to the  
2 printed document corresponding to the designation of the Designating Party and including the  
3 production number and designation associated with the native file. No one shall seek to use in this  
4 litigation a .tiff, .pdf or other other image format version of a document produced in native file  
5 format without first (1) providing a copy of the image format version to the Producing Party so  
6 that the Producing Party can review the image to ensure that no information has been altered, and  
7 (2) obtaining the consent of the Producing Party, which consent shall not be unreasonably  
8 withheld.

9 (d) Depositions and Testimony. Parties or testifying persons or entities may  
10 designate depositions and other testimony with the appropriate designation by indicating on the  
11 record at the time the testimony is given or by sending written notice of how portions of the  
12 transcript of the testimony is designated within thirty (30) days of receipt of the transcript of the  
13 testimony. If no indication on the record is made, all information disclosed during a deposition  
14 shall be deemed “CONFIDENTIAL – ATTORNEYS’ EYES ONLY” until the time within which  
15 it may be appropriately designated as provided for herein has passed. Any Party that wishes to  
16 disclose the transcript, or information contained therein, may provide written notice of its intent to  
17 treat the transcript as non-confidential, after which time, any Party that wants to maintain any  
18 portion of the transcript as confidential must designate the confidential portions within fourteen  
19 (14) days, or else the transcript may be treated as non-confidential. Any Protected Material that is  
20 used in the taking of a deposition shall remain subject to the provisions of this Protective Order,  
21 along with the transcript pages of the deposition testimony dealing with such Protected Material.  
22 In such cases the court reporter shall be informed of this Protective Order and shall be required to  
23 operate in a manner consistent with this Protective Order. In the event the deposition is  
24 videotaped, the original and all copies of the videotape shall be marked by the video technician to  
25 indicate that the contents of the videotape are subject to this Protective Order, substantially along the  
26 lines of “This videotape contains confidential testimony used in this case and is not to be  
27 viewed or the contents thereof to be displayed or revealed except pursuant to the terms of the  
28 operative Protective Order in this matter or pursuant to written stipulation of the parties.”

Counsel for any Producing Party shall have the right to exclude from oral depositions, other than the deponent, deponent's counsel, the reporter and videographer (if any), any person who is not authorized by this Protective Order to receive or access Protected Material based on the designation of such Protected Material. Such right of exclusion shall be applicable only during periods of examination or testimony regarding such Protected Material.

8. **DISCOVERY MATERIAL DESIGNATED AS "CONFIDENTIAL"**

(a) A Producing Party may designate Discovery Material as "CONFIDENTIAL" if it contains or reflects confidential, proprietary, and/or commercially sensitive information.

(b) Unless otherwise ordered by the Court, Discovery Material designated as "CONFIDENTIAL" may be disclosed only to the following:

(i) The Receiving Party's Outside Counsel, such counsel's immediate paralegals and staff, and any copying or clerical litigation support services working at the direction of such counsel, paralegals, and staff;

(ii) Not more than three (3) representatives of the Receiving Party who are officers or employees of the Receiving Party, who may be, but need not be, in-house counsel for the Receiving Party, as well as their immediate paralegals and staff, to whom disclosure is reasonably necessary for this case, provided that: (a) each such person has agreed to be bound by the provisions of the Protective Order by signing a copy of Exhibit A; and (b) no unresolved objections to such disclosure exist after proper notice has been given to all Parties as set forth in Paragraph 12 below;

(iii) Any outside expert or consultant retained by the Receiving Party to assist in this action, provided that disclosure is only to the extent necessary to perform such work; and provided that: (a) such expert or consultant has agreed to be bound by the provisions of the Protective Order by signing a copy of Exhibit A; (b) such expert or consultant is not a current officer, director, or employee of a Party or of a competitor of a Party, nor anticipated at the time of retention to become an officer, director or employee of a Party or of a competitor of a Party; (c) such expert or consultant accesses the materials in the United States only, and does not transport

1 them to or access them from any foreign jurisdiction; and (d) no unresolved objections to such  
2 disclosure exist after proper notice has been given to all Parties as set forth in Paragraph 12 below;

3 (iv) Court reporters, stenographers and videographers retained to record  
4 testimony taken in this action;

5 (v) The Court, jury, and court personnel;

6 (vi) Graphics, translation, design, and/or trial consulting personnel,  
7 having first agreed to be bound by the provisions of the Protective Order by signing a copy of  
8 Exhibit A;

9 (vii) Mock jurors who have signed an undertaking or agreement agreeing  
10 not to publicly disclose Protected Material and to keep any information concerning Protected  
11 Material confidential;

12 (viii) Any mediator who is assigned to hear this matter, and his or her  
13 staff, subject to their agreement to maintain confidentiality to the same degree as required by this  
14 Protective Order; and

15 (ix) Any other person with the prior written consent of the Producing  
16 Party.

17 9. **DISCOVERY MATERIAL DESIGNATED AS “CONFIDENTIAL –**  
18 **ATTORNEYS’ EYES ONLY”**

19 (a) A Producing Party may designate Discovery Material as “CONFIDENTIAL  
20 – ATTORNEYS’ EYES ONLY” if it contains or reflects information that is extremely  
21 confidential and/or sensitive in nature and the Producing Party reasonably believes that the  
22 disclosure of such Discovery Material is likely to cause economic harm or significant competitive  
23 disadvantage to the Producing Party. The Parties agree that the following information, if non-  
24 public, shall be presumed to merit the “CONFIDENTIAL – ATTORNEYS’ EYES ONLY”  
25 designation: trade secrets, pricing information, financial data, sales information, sales or  
26 marketing forecasts or plans, business plans, sales or marketing strategy, product development  
27 information, engineering documents, testing documents, employee information, and other non-  
28 public information of similar competitive and business sensitivity.



1 (b) Unless otherwise ordered by the Court, Discovery Material designated as  
2 “CONFIDENTIAL – ATTORNEYS’ EYES ONLY” may be disclosed only to:

3 (i) The Receiving Party’s Outside Counsel, provided that such Outside  
4 Counsel is not involved in competitive decision-making, as defined by *U.S. Steel v. United States*,  
5 730 F.2d 1465, 1468 n.3 (Fed. Cir. 1984), on behalf of a Party or a competitor of a Party, and such  
6 Outside Counsel’s immediate paralegals and staff, and any copying or clerical litigation support  
7 services working at the direction of such counsel, paralegals, and staff;

8 (ii) With respect to Discovery Material produced by the Plaintiff, not  
9 more than three (3) in-house counsel of the Receiving Party, as well as their immediate paralegals  
10 and staff to whom disclosure is reasonably necessary for this case, provided that: (a) each such  
11 person has agreed to be bound by the provisions of the Protective Order by signing a copy of  
12 Exhibit A; and (b) no unresolved objections to such disclosure exist after proper notice has  
13 been given to all Parties as set forth in Paragraph 12 below;

14 (iii) Any outside expert or consultant retained by the Receiving Party to  
15 assist in this action, provided that disclosure is only to the extent necessary to perform such work;  
16 and provided that: (a) such expert or consultant has agreed to be bound by the provisions of the  
17 Protective Order by signing a copy of Exhibit A; (b) such expert or consultant is not a current  
18 officer, director, or employee of a Party or of a competitor of a Party, nor anticipated at the time of  
19 retention to become an officer, director, or employee of a Party or of a competitor of a Party; (c)  
20 such expert or consultant is not involved in competitive decision-making, as defined by *U.S. Steel*  
21 *v. United States*, 730 F.2d 1465, 1468 n.3 (Fed. Cir. 1984), on behalf of a Party or a competitor of  
22 a Party; (d) such expert or consultant accesses the materials in the United States only, and does not  
23 transport them to or access them from any foreign jurisdiction; and (e) no unresolved objections to  
24 such disclosure exist after proper notice has been given to all Parties as set forth in Paragraph 12  
25 below;

26 (iv) Court reporters, stenographers and videographers retained to record  
27 testimony taken in this action;

28 (v) The Court, jury, and court personnel;

(vi) Graphics, translation, design, and/or trial consulting personnel, having first agreed to be bound by the provisions of the Protective Order by signing a copy of Exhibit A;

(vii) Any mediator who is assigned to hear this matter, and his or her staff, subject to their agreement to maintain confidentiality to the same degree as required by this Protective Order; and

(viii) Any other person with the prior written consent of the Producing Party.

(c) In addition, a Party may disclose arguments and materials derived from Discovery Material designated as “CONFIDENTIAL – ATTORNEYS’ EYES ONLY” to mock jurors who have signed an undertaking or agreement agreeing not to publicly disclose Protected Material and to keep any information concerning Protected Material confidential. A Party may not disclose to mock jurors any original, as-produced materials or information (including, for example, documents, deposition testimony, or interrogatory responses) produced by another Party designated as “CONFIDENTIAL - ATTORNEYS’ EYES ONLY.”

10. **DISCOVERY MATERIAL DESIGNATED AS “CONFIDENTIAL – OUTSIDE ATTORNEYS’ EYES ONLY - SOURCE CODE”**

(a) To the extent production of Source Code becomes necessary to the prosecution or defense of the case, a Producing Party may designate Source Code as “CONFIDENTIAL – OUTSIDE ATTORNEYS’ EYES ONLY - SOURCE CODE” if it comprises or includes confidential, proprietary, and/or trade secret Source Code.

(b) Nothing in this Order shall be construed as a representation or admission that Source Code is properly discoverable in this action, or to obligate any Party to produce any Source Code.

(c) Unless otherwise ordered by the Court, Discovery Material designated as “CONFIDENTIAL – OUTSIDE ATTORNEYS’ EYES ONLY - SOURCE CODE” shall be subject to the provisions set forth in Paragraph 11 below, and may be disclosed, subject to Paragraph 11 below, solely to:

(i) The Receiving Party's Outside Counsel, provided that such Outside Counsel is not involved in competitive decision-making, as defined by *U.S. Steel v. United States*, 730 F.2d 1465, 1468 n.3 (Fed. Cir. 1984), on behalf of a Party or a competitor of a Party, and such Outside Counsel's immediate paralegals and staff, and any copying or clerical litigation support services working at the direction of such counsel, paralegals, and staff;

(ii) Any outside expert or consultant retained by the Receiving Party to assist in this action, provided that disclosure is only to the extent necessary to perform such work; and provided that: (a) such expert or consultant has agreed to be bound by the provisions of the Protective Order by signing a copy of Exhibit A; (b) such expert or consultant is not a current officer, director, or employee of a Party or of a competitor of a Party, nor anticipated at the time of retention to become an officer, director or employee of a Party or of a competitor of a Party; (c) such expert or consultant is not involved in competitive decision-making, as defined by *U.S. Steel v. United States*, 730 F.2d 1465, 1468 n.3 (Fed. Cir. 1984), on behalf of a Party or a competitor of a Party; and (d) no unresolved objections to such disclosure exist after proper notice has been given to all Parties as set forth in Paragraph 12 below;

(iii) Court reporters, stenographers and videographers retained to record testimony taken in this action;

(iv) The Court, jury, and court personnel;

(v) Any mediator who is assigned to hear this matter, and his or her staff, subject to their agreement to maintain confidentiality to the same degree as required by this Protective Order; and

(vi) Any other person with the prior written consent of the Producing Party.

11. **DISCLOSURE AND REVIEW OF SOURCE CODE**

(a) Any Source Code that is produced by Plaintiff shall be made available for inspection in electronic format at the Austin, Texas office of its outside counsel, Williams, Simons, & Landis PLLP, or any other location mutually agreed by the Parties. Any Source Code that is produced by Apple Inc. will be made available for inspection at the Los Angeles (Century

1 City), California office of its outside counsel, DLA Piper, or any other location mutually agreed  
2 by the Parties. Source Code will be made available for inspection between the hours of 8 a.m. and  
3 5 p.m. on business days (i.e., weekdays that are not Federal holidays), although the Parties will be  
4 reasonable in accommodating reasonable requests to conduct inspections at other times.

5 (b) Prior to the first inspection of any requested Source Code, the Receiving  
6 Party shall provide thirty (30) days notice of the Source Code that it wishes to inspect. The  
7 Receiving Party shall provide fourteen (14) days notice prior to any additional inspections.

8 (c) Source Code that is designated “CONFIDENTIAL – OUTSIDE  
9 ATTORNEYS’ EYES ONLY - SOURCE CODE” shall be produced for inspection and review  
10 subject to the following provisions, unless otherwise agreed by the Producing Party:

11 (i) All Source Code shall be made available by the Producing Party to  
12 the Receiving Party’s outside counsel and/or experts in a secure room on a secured computer  
13 without Internet access or network access to other computers and on which all access ports have  
14 been disabled (except for one printer port), as necessary and appropriate to prevent and protect  
15 against any unauthorized copying, transmission, removal or other transfer of any Source Code  
16 outside or away from the computer on which the Source Code is provided for inspection (the  
17 “Source Code Computer” in the “Source Code Review Room”). The Producing Party shall install  
18 tools that are sufficient for viewing and searching the code produced, on the platform produced, if  
19 such tools exist and are presently used in the ordinary course of the Producing Party’s business.  
20 The Receiving Party’s outside counsel and/or experts may request that commercially available  
21 software tools for viewing and searching Source Code be installed on the secured computer,  
22 provided, however, that (a) the Receiving Party possesses an appropriate license to such software  
23 tools; (b) the Producing Party approves such software tools; and (c) such other software tools are  
24 reasonably necessary for the Receiving Party to perform its review of the Source Code consistent  
25 with all of the protections herein. The Receiving Party must provide the Producing Party with the  
26 CD or DVD containing such licensed software tool(s) at least twenty-one (21) days in advance of  
27 the date upon which the Receiving Party wishes to have the additional software tools available for  
28 use on the Source Code Computer.

(ii) No recordable media or recordable devices, including without limitation sound recorders, computers, cellular telephones, peripheral equipment, cameras, CDs, DVDs, or drives of any kind, shall be permitted into the Source Code Review Room.

(iii) The Receiving Party's outside counsel and/or experts shall be entitled to take notes relating to the Source Code but may not copy the Source Code into the notes and may not take such notes electronically on the Source Code Computer itself or any other computer.

(iv) The Producing Party may visually monitor the activities of the Receiving Party's representatives during any Source Code review, but only to ensure that no unauthorized electronic records of the Source Code and no information concerning the Source Code are being created or transmitted in any way.

(v) No copies of all or any portion of the Source Code may leave the room in which the Source Code is inspected except as otherwise provided herein. Further, no other written or electronic record of the Source Code is permitted except as otherwise provided herein. The Producing Party shall make available a laser printer with commercially reasonable printing speeds for on-site printing during inspection of the Source Code. The Receiving Party may print limited portions of the Source Code only when necessary to prepare court filings or pleadings or other papers (including a testifying expert's expert report). Any printed portion that consists of more than five (5) pages of a continuous block of Source Code shall be presumed to be excessive, and the burden shall be on the Receiving Party to demonstrate the need for such a printed copy. The Receiving Party may print out no more than 20 pages total. The Receiving Party shall not print Source Code in order to review blocks of Source Code elsewhere in the first instance, i.e., as an alternative to reviewing that Source Code electronically on the Source Code Computer, as the Parties acknowledge and agree that the purpose of the protections herein would be frustrated by printing portions of code for review and analysis elsewhere, and that printing is permitted only when necessary to prepare court filings or pleadings or other papers (including a testifying expert's expert report). Upon printing any such portions of Source Code, the printed pages shall be collected by the Producing Party. The Producing Party shall Bates number, copy,

1 and label “CONFIDENTIAL – OUTSIDE ATTORNEYS’ EYES ONLY - SOURCE CODE” any  
2 pages printed by the Receiving Party. Within fourteen (14) days, the Producing Party shall either (i)  
3 provide one copy set of such pages to the Receiving Party or (ii) inform the Requesting Party that it  
4 objects that the printed portions are excessive and/or not done for a permitted purpose. If, after  
5 meeting and conferring, the Producing Party and the Receiving Party cannot resolve the objection,  
6 the Receiving Party shall be entitled to seek a Court resolution of whether the printed Source Code  
7 in question is narrowly tailored and was printed for a permitted purpose. The burden shall be on  
8 the Receiving Party to demonstrate that such printed portions are no more than is reasonably  
9 necessary for a permitted purpose and not merely printed for the purposes of review and analysis  
10 elsewhere. The printed pages shall constitute part of the Source Code produced by the Producing  
11 Party in this action.

12 (vi) All persons who will review a Producing Party’s Source Code on  
13 behalf of a Receiving Party, including members of a Receiving Party’s outside law firm, shall be  
14 identified in writing to the Producing Party at least five (5) days in advance of the first time that  
15 such person reviews such Source Code. Such identification shall be in addition to any other  
16 disclosure required under this Order. All persons viewing Source Code shall sign on each day  
17 they view Source Code a log that will include the names of persons who enter the locked room to  
18 view the Source Code and when they enter and depart. The Producing Party shall be entitled to a  
19 copy of the log upon one (1) day’s advance notice to the Receiving Party.

20 (vii) Unless otherwise agreed in advance by the Parties in writing,  
21 following each day on which inspection is done under this Order, the Receiving Party’s outside  
22 counsel and/or experts shall remove all notes, documents, and all other materials from the Source  
23 Code Review Room. The Producing Party shall not be responsible for any items left in the room  
24 following each inspection session, and the Receiving Party shall have no expectation of  
25 confidentiality for any items left in the room following each inspection session without a prior  
26 agreement to that effect. Proper identification of all authorized persons shall be provided prior to  
27 any access to the secure room or the computer containing Source Code. Proper identification  
28 requires showing, at a minimum, a photo identification card sanctioned by the government of any

1 State of the United States, by the government of the United States, or by the nation state of the  
2 authorized person's current citizenship. Access to the secure room or the Source Code Computer  
3 may be denied, at the discretion of the supplier, to any individual who fails to provide proper  
4 identification.

5 (viii) Other than as provided above, the Receiving Party will not copy,  
6 remove, or otherwise transfer any Source Code from the Source Code Computer including,  
7 without limitation, copying, removing, or transferring the Source Code onto any recordable media  
8 or recordable device. The Receiving Party will not transmit any Source Code in any way from the  
9 Producing Party's facilities or the offices of its outside counsel of record.

10 (ix) The Receiving Party's outside counsel of record may make no more  
11 than three (3) additional paper copies of any portions of the Source Code received from a  
12 Producing Party pursuant to Paragraph 11(c)(v), not including copies attached to court filings or  
13 used at depositions, and shall maintain a log of all paper copies of the Source Code. The log shall  
14 include the names of the reviewers and/or recipients of paper copies and locations where the paper  
15 copies are stored. Upon one (1) day's advance notice to the Receiving Party by the Producing  
16 Party, the Receiving Party shall provide a copy of this log to the Producing Party.

17 (x) The Receiving Party's outside counsel of record and any person  
18 receiving a copy of any Source Code shall maintain and store any paper copies of the Source Code  
19 at their offices in a manner that prevents duplication of or unauthorized access to the Source Code,  
20 including, without limitation, storing the Source Code in a locked room or cabinet at all times  
21 when it is not in use. No more than a total of ten (10) individuals identified by the receiving party  
22 shall have access to the printed portions of Apple Source Code (except insofar as such code  
23 appears in any court filing or expert report).

24 (xi) For depositions, the Receiving Party shall not bring copies of any  
25 printed Source Code. Rather, at least ten (10) days before the date of the deposition, the Receiving  
26 Party shall notify the Producing Party about the specific portions of Source Code it wishes to use at  
27 the deposition, and the Producing Party shall bring printed copies of those portions to the deposition  
28 for use by the Receiving Party. Copies of Source Code that are marked as deposition exhibits shall



1 not be provided to the Court Reporter or attached to deposition transcripts; rather, the deposition  
2 record will identify the exhibit by its production numbers. All paper copies of Source Code  
3 brought to the deposition shall remain with the Producing Counsel's outside counsel for secure  
4 destruction in a timely manner following the deposition.

5 (xii) Except as provided in this sub-paragraph, absent express written  
6 permission from the Producing Party, the Receiving Party may not create electronic images, or any  
7 other images, or make electronic copies, of the Source Code from any paper copy of Source Code  
8 for use in any manner (including by way of example only, the Receiving Party may not scan the  
9 Source Code to a PDF or photograph the code). Images or copies of Source Code shall not be  
10 included in correspondence between the Parties (references to production numbers shall be used  
11 instead), and shall be omitted from pleadings and other papers whenever possible. If a Party  
12 reasonably believes that it needs to submit a portion of Source Code as part of a filing with the  
13 Court, the Parties shall meet and confer as to how to make such a filing while protecting the  
14 confidentiality of the Source Code and such Source Code will not be filed absent agreement from  
15 the Producing Party that the confidentiality protections will be adequate. If a Producing Party  
16 agrees to produce an electronic copy of all or any portion of its Source Code or provide written  
17 permission to the Receiving Party that an electronic or any other copy needs to be made for a  
18 Court filing, access to the Receiving Party's submission, communication, and/or disclosure of  
19 electronic files or other materials containing any portion of Source Code (paper or electronic) shall  
20 at all times be limited solely to individuals who are expressly authorized to view Source Code  
21 under the provisions of this Order. Where the Producing Party has provided the express written  
22 permission required under this provision for a Receiving Party to create electronic copies of  
23 Source Code, the Receiving Party shall maintain a log of all such electronic copies of any portion  
24 of Source Code in its possession or in the possession of its retained consultants, including the  
25 names of the reviewers and/or recipients of any such electronic copies, and the locations and  
26 manner in which the electronic copies are stored. Additionally, any such electronic copies must be  
27 labeled "CONFIDENTIAL - ATTORNEYS' EYES ONLY - SOURCE CODE" as provided for in  
28 this Order.



12. **NOTICE OF DISCLOSURE**

(a) Prior to disclosing any Protected Material to any person described in Paragraphs 8(b)(ii), 8(b)(iii), 9(b)(ii), 9(b)(iii), or 10(c)(ii) (referenced below as “Person”), the Party seeking to disclose such information shall provide the Producing Party with written notice that includes:

(i) the name of the Person;

(ii) an up-to-date curriculum vitae of the Person;

(iii) the present employer and title of the Person;

(iv) an identification of all of the Person’s past and current employment and consulting

relationships, including direct relationships and relationships through entities

owned or controlled by the Person, including but not limited to an identification of

any individual or entity with or for whom the person is employed or to whom the

person provides consulting services relating to the design, development, operation,

or patenting of image capture technology based on the determination of gestures, or

relating to the acquisition of intellectual property assets relating to image capture

technology based on the determination of gestures;

(v) an identification of all pending patent applications on which the Person is named as an

inventor, in which the Person has any ownership interest, or as to which the Person

has had or anticipates in the future any involvement in advising on, consulting on,

preparing, prosecuting, drafting, editing, amending, or otherwise affecting the

scope of the claims; and

(vi) a list of the cases in which the Person has testified at deposition or trial within the last

five (5) years.

Further, the Party seeking to disclose Protected Material shall provide such other information regarding the Person’s professional activities reasonably requested by the Producing Party for it to evaluate whether good cause exists to object to the disclosure of Protected Material to the outside expert or consultant. During the pendency of and for a period of two (2) years after the final resolution of this action, including all appeals, the Party seeking to disclose Protected Material

1 shall immediately provide written notice of any change with respect to the Person's involvement  
2 in the design, development, operation or patenting of image capture technology based on the  
3 determination of gestures, or the acquisition of intellectual property assets relating to image  
4 capture technology based on the determination of gestures.

5 (b) Within fourteen (14) days of receipt of the disclosure of the Person, the  
6 Producing Party or Parties may object in writing to the Person for good cause. In the absence of  
7 an objection at the end of the fourteen (14) day period, the Person shall be deemed approved under  
8 this Protective Order. There shall be no disclosure of Protected Material to the Person prior to  
9 expiration of this fourteen (14) day period. If the Producing Party objects to disclosure to the  
10 Person within such fourteen (14) day period, the Parties shall meet and confer via telephone or in  
11 person within seven (7) days following the objection and attempt in good faith to resolve the  
12 dispute on an informal basis. If the dispute is not resolved, the Party objecting to the disclosure  
13 will have seven (7) days from the date of the meet and confer to seek relief from the Court. If  
14 relief is not sought from the Court within that time, the objection shall be deemed withdrawn. If  
15 relief is sought, designated materials shall not be disclosed to the Person in question until the  
16 Court resolves the objection.

17 (c) For purposes of this section, "good cause" shall include an objectively  
18 reasonable concern that the Person will, advertently or inadvertently, use or disclose Discovery  
19 Materials in a way or ways that are inconsistent with the provisions contained in this Order.

20 (d) Prior to receiving any Protected Material under this Order, the Person must  
21 execute a copy of the "Agreement to Be Bound by Protective Order" (Exhibit A hereto) and serve  
22 it on all Parties.

23 (e) An initial failure to object to a Person under this Paragraph 12 shall not  
24 preclude the nonobjecting Party from later objecting to continued access by that Person for good  
25 cause. If an objection is made, the Parties shall meet and confer via telephone or in person within  
26 seven (7) days following the objection and attempt in good faith to resolve the dispute informally.  
27 If the dispute is not resolved, the Party objecting to the disclosure will have seven (7) days from  
28 the date of the meet and confer to seek relief from the Court. The designated Person may continue

1 to have access to information that was provided to such Person prior to the date of the objection.  
2 If a later objection is made, no further Protected Material shall be disclosed to the Person until the  
3 Court resolves the matter or the Producing Party withdraws its objection. Notwithstanding the  
4 foregoing, if the Producing Party fails to move for a protective order within seven (7) business  
5 days after the meet and confer, further Protected Material may thereafter be provided to the  
6 Person.

7 13. **CHALLENGING DESIGNATIONS OF PROTECTED MATERIAL**

8 (a) A Party shall not be obligated to challenge the propriety of any designation  
9 of Discovery Material under this Order at the time the designation is made, and a failure to do so  
10 shall not preclude a subsequent challenge thereto.

11 (b) Any challenge to a designation of Discovery Material under this Order shall  
12 be written, shall be served on outside counsel for the Producing Party, shall particularly identify  
13 the documents or information that the Receiving Party contends should be differently designated,  
14 and shall state the grounds for the objection. Thereafter, further protection of such material shall  
15 be resolved in accordance with the following procedures:

16 (i) The objecting Party shall have the burden of conferring either in  
17 person, in writing, or by telephone with the Producing Party claiming protection (as well as any  
18 other interested party) in a good faith effort to resolve the dispute. The Producing Party shall have  
19 the burden of justifying the disputed designation;

20 (ii) If the Parties cannot resolve a challenge without court  
21 intervention, the parties shall follow the Court's Standing Order in Civil Cases regarding  
22 Discovery and Discovery Motions. The parties may file a joint letter brief regarding retaining  
23 confidentiality within 21 days of the initial notice of challenge or within 14 days of the parties  
24 agreeing that the meet and confer process will not resolve their dispute, whichever is earlier.  
25 Failure by a Designating Party to file such discovery dispute letter within the applicable 21- or  
26 14-day period (set forth above) with the Court shall automatically waive the confidentiality  
27 designation for each challenged designation. If, after submitting a joint letter brief, the Court  
28 allows that a motion may be filed, any such motion must be accompanied by a competent

1 declaration affirming that the movant has complied with the meet and confer requirements  
2 imposed in the preceding paragraph. The Court, in its discretion, may elect to transfer the  
3 discovery matter to a Magistrate Judge.

4 In addition, the parties may file a joint letter brief regarding a challenge to a confidentiality  
5 designation at any time if there is good cause for doing so, including a challenge to the designation  
6 of a deposition transcript or any portions thereof. If, after submitting a joint letter brief, the Court  
7 allows that a motion may be filed, any motion brought pursuant to this provision must be  
8 accompanied by a competent declaration affirming that the movant has complied with the meet  
9 and confer requirements imposed by the preceding paragraph. The Court, in its discretion, may  
10 elect to refer the discovery matter to a Magistrate Judge.

11 The burden of persuasion in any such challenge proceeding shall be on the Designating  
12 Party. Frivolous challenges, and those made for an improper purpose (e.g., to harass or impose  
13 unnecessary expenses and burdens on other parties) may expose the Challenging Party to  
14 sanctions. Unless the Designating Party has waived the confidentiality designation by failing to  
15 file a letter brief to retain confidentiality as described above, all parties shall continue to afford the  
16 material in question the level of protection to which it is entitled under the Producing Party's  
17 designation until the court rules on the challenge.

18 14. **DATA SECURITY**

19 (a) Receiving Party shall implement an information security management  
20 system ("ISMS") to safeguard Protected Materials, including reasonable and appropriate  
21 administrative, physical, and technical safeguards, and network security and encryption  
22 technologies governed by written policies and procedures, which shall comply with at least one of  
23 the then-current versions of the following standards: (a) the International Organization for  
24 Standardization's 27001 standard; (b) the National Institute of Standards and Technology's  
25 (NIST) 800-53 standard; (c) the Center for Internet Security's Critical Security Controls; or (d) the  
26 most recently published version of another widely recognized industry or government  
27  
28

1 cybersecurity framework. The Parties shall implement multi-factor authentication<sup>1</sup> for any access  
2 to Protected Materials and implement encryption of all Protected Materials (i) in transit outside of  
3 network(s) covered by the Party's ISMS (except as necessary to submit documents to the court in  
4 accordance with Section 13 below) and (ii) at rest where reasonably practical.

5 (b) If Receiving Party becomes aware of any unauthorized access, use, or  
6 disclosure of Protected Materials or devices containing Protected Materials ("Data Breach"),  
7 Receiving Party shall promptly, and in no case later than 48 hours after learning of the Data  
8 Breach, notify Producing Party in writing and fully cooperate with Producing Party as may be  
9 reasonably necessary to (a) determine the source, extent, or methodology of such Data Breach, (b)  
10 to recover or to protect Protected Materials, and/or (c) to satisfy Producing Party's legal,  
11 contractual, or other obligations. For the avoidance of doubt, notification obligations under this  
12 Section arise when the Receiving Party both (a) learns of a Data Breach, and (b) learns that any of  
13 the Producing Party's Protected Materials are potentially subject to the Data Breach. The  
14 notification obligations set forth in this Section do not run from the time the Data Breach itself.

15 (c) Receiving Party shall promptly comply with Producing Party's reasonable  
16 request(s) that Receiving Party investigate, remediate, and mitigate the effects of a Data Breach  
17 and any potential recurrence and take all reasonable steps to terminate and prevent unauthorized  
18 access. Receiving Party shall promptly provide any information that is reasonably requested by  
19 Producing Party and that relates to any such Data Breach, including but not limited to, the  
20 Protected Material that was potentially impacted, underlying vulnerabilities or flaws that led to the  
21 Data Breach, start or end date of the Data Breach, date of discovery, and specific actions taken to  
22 contain, mitigate, or remediate the Data Breach. For the avoidance of doubt, nothing in this  
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26 <sup>1</sup> Multi-factor authentication is "[a]uthentication using two or more factors to achieve authentication. Factors are (i)  
27 something you know (e.g., password/personal identification number); (ii) something you have (e.g., cryptographic  
28 identification device, token); and (iii) something you are (e.g., biometric)." National Institute of Standards and  
Technology (NIST), Special Publication SP 1800-12, Appendix B at 63, available at  
<https://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.1800-12.pdf>; *see also* NIST, Special Publication 800-  
53, at 132, available at <https://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.800-53r5.pdf>.

1 Section 11 is intended to create a waiver of any applicable privileges, including privileges  
2 applicable to a Party's investigation and remediation of a Data Breach.

3 (d) If Receiving Party is aware of a Data Breach, the Parties shall meet and  
4 confer in good faith regarding any adjustments that should be made to the discovery process and  
5 discovery schedule in this action, potentially including but not limited to (1) additional security  
6 measures to protect Discovery Material; (2) a stay or extension of discovery pending investigation  
7 of a Data Breach and/or implementation of additional security measures; and (3) a sworn  
8 assurance that Discovery Materials will be handled in the future only by entities not impacted by  
9 the Data Breach. Further, the Receiving Party shall submit to reasonable discovery concerning the  
10 Data Breach.

11 (e) In the event of a Data Breach affecting Protected Material of Designating  
12 Party, at Designating Party's request, Receiving Party within 10 business days shall provide a  
13 copy of its most recent ISMS policies and procedures that relate to the safeguarding of Protected  
14 Materials and that preceded the Data Breach.

15 (f) Receiving Party shall comply with this Section 11 and any applicable  
16 security, privacy, data protection, or breach notification laws, rules, regulations, or directives  
17 ("Applicable Data Law"). If Receiving Party is uncertain whether a particular practice would  
18 conform with the requirements of this Section 9, it may meet and confer with the other Parties; if  
19 any Party believes that the proposed practice would violate this Protective Order, it may, within 10  
20 business days, bring the dispute to the Court. The Party challenging the proposed practice would  
21 bear the burden of demonstrating a violation.

22 15. **SUBPOENAS OR COURT ORDERS**

23 (a) If at any time Protected Material is subpoenaed by any court, arbitral,  
24 administrative, or legislative body, the Party to whom the subpoena or other request is directed  
25 shall immediately give prompt written notice thereof to every Party who has produced such  
26 Discovery Material and to its counsel and shall provide each such Party with an opportunity to  
27 move for a protective order regarding the production of Protected Materials implicated by the  
28 subpoena.

16. **FILING PROTECTED MATERIAL**

(a) Absent written permission from the Producing Party or a court Order secured after appropriate notice to all interested persons, a Receiving Party may not file or disclose in the public record any Protected Material.

(b) Any Party is authorized under Civil L.R. 79-5 to file under seal with the Court any brief, document or materials that are designated as Protected Material under this Order. However, nothing in this section shall in any way limit or detract from this Order's requirements as to Source Code.

17. **INADVERTENT DISCLOSURE OF PRIVILEGED MATERIAL**

(a) The inadvertent production by a Party of Discovery Material subject to the attorney-client privilege, work-product protection, or any other applicable privilege or protection, despite the Producing Party's reasonable efforts to prescreen such Discovery Material prior to production, will not waive the applicable privilege and/or protection if a request for return of such inadvertently produced Discovery Material is made promptly after the Producing Party learns of its inadvertent production.

(b) Upon a request from any Producing Party who has inadvertently produced Discovery Material that it believes is privileged and/or protected, each Receiving Party shall immediately return such Protected Material or Discovery Material and all copies to the Producing Party, except for any pages containing privileged markings by the Receiving Party which shall instead be destroyed and certified as such by the Receiving Party to the Producing Party.

(c) Nothing herein shall prevent the Receiving Party from preparing a record for its own use containing the date, author, addresses, and topic of the inadvertently produced Discovery Material and such other information as is reasonably necessary to identify the Discovery Material and describe its nature to the Court in any motion to compel production of the Discovery Material.

18. **INADVERTENT FAILURE TO DESIGNATE PROPERLY**

(a) Pursuant to Federal Rule of Evidence 502(d) and (e), the production of a privileged or work product protected document is not a waiver of privilege or protection from discovery in this case or in any other federal or state proceeding. For example, the mere



1 production of a privileged or work product protected document in this case as part of a production  
2 is not itself a waiver. Nothing in this Order shall be interpreted to require disclosure of irrelevant  
3 information or relevant information protected by the attorney-client privilege, work product  
4 doctrine, or any other applicable privilege or immunity. The parties do not waive any objections as  
5 to the production, discoverability, admissibility, or confidentiality of documents and ESI.  
6 Moreover, nothing in this Order shall be interpreted to require disclosure of information subject to  
7 privacy protections as set forth in law or regulation, including information that may need to be  
8 produced from outside of the United States and/or may be subject to foreign laws.

9 (b) A Receiving Party shall not be in breach of this Order for any use of such  
10 Discovery Material before the Receiving Party receives such notice that such Discovery Material  
11 is protected under one of the categories of this Order, unless an objectively reasonable person  
12 would have realized that the Discovery Material should have been appropriately designated with a  
13 confidentiality designation under this Order. Once a Receiving Party has received notification of  
14 the correct confidentiality designation for the Protected Material with the correct confidentiality  
15 designation, the Receiving Party shall treat such Discovery Material (subject to the exception in  
16 Paragraph 17(c) below) at the appropriately designated level pursuant to the terms of this Order.

17 (c) Notwithstanding the above, a subsequent designation of  
18 “CONFIDENTIAL,” “CONFIDENTIAL – ATTORNEYS’ EYES ONLY” or “CONFIDENTIAL  
19 – ATTORNEYS’ EYES ONLY – SOURCE CODE” shall apply on a going forward basis and  
20 shall not disqualify anyone who reviewed “CONFIDENTIAL,” “CONFIDENTIAL –  
21 ATTORNEYS’ EYES ONLY” or “CONFIDENTIAL – ATTORNEYS’ EYES ONLY –  
22 SOURCE CODE” materials while the materials were not marked “CONFIDENTIAL –  
23 ATTORNEYS’ EYES ONLY” or “CONFIDENTIAL – ATTORNEYS’ EYES ONLY –  
24 SOURCE CODE” from engaging in the activities set forth in Paragraph 6(b).

25 19. **INADVERTENT DISCLOSURE NOT AUTHORIZED BY ORDER**

26 (a) In the event of a disclosure of any Discovery Material pursuant to this Order  
27 to any person or persons not authorized to receive such disclosure under this Protective Order, the  
28 Party responsible for having made such disclosure, and each Party with knowledge thereof, shall



1 immediately notify counsel for the Producing Party whose Discovery Material has been disclosed  
2 and provide to such counsel all known relevant information concerning the nature and  
3 circumstances of the disclosure. The responsible disclosing Party shall also promptly take all  
4 reasonable measures to retrieve the improperly disclosed Discovery Material and to ensure that no  
5 further or greater unauthorized disclosure and/or use thereof is made.

6 (b) Unauthorized or inadvertent disclosure does not change the status of  
7 Discovery Material or waive the right to hold the disclosed document or information as Protected.

8 20. **FINAL DISPOSITION**

9 (a) Not later than ninety (90) days after the Final Disposition of this case, each  
10 Party shall return all Discovery Material of a Producing Party to the respective outside counsel of  
11 the Producing Party or destroy such Material, at the option of the Producing Party. For purposes  
12 of this Order, "Final Disposition" occurs after an order, mandate, or dismissal finally terminating  
13 the above-captioned action with prejudice, including all appeals.

14 (b) All Parties that have received any such Discovery Material shall certify in  
15 writing that all such materials have been returned to the respective outside counsel of the  
16 Producing Party or destroyed. Notwithstanding the provisions for return of Discovery Material,  
17 outside counsel may retain one set of pleadings, correspondence and attorney and consultant work  
18 product (but not document productions) for archival purposes, but must return any pleadings,  
19 correspondence, and consultant work product that contain Source Code.

20 21. **DISCOVERY FROM EXPERTS OR CONSULTANTS**

21 (a) Absent good cause, drafts of reports of testifying experts, and reports and  
22 other written materials, including drafts, of consulting experts, shall not be discoverable, except  
23 for consulting reports relied upon by a testifying expert.

24 (b) Reports and materials exempt from discovery under the foregoing  
25 Paragraph shall be treated as attorney work product for the purposes of this case and Protective  
26 Order.

27 22. **MISCELLANEOUS**

1 (a) Right to Further Relief. Nothing in this Order abridges the right of any  
2 person to seek its modification by the Court in the future. By stipulating to this Order, the Parties  
3 do not waive the right to argue that certain material may require additional or different  
4 confidentiality protections than those set forth herein.

5 (b) Termination of Matter and Retention of Jurisdiction. The Parties agree that  
6 the terms of this Protective Order shall survive and remain in effect after the Final Determination  
7 of the above-captioned matter. The Court shall retain jurisdiction after Final Determination of this  
8 matter to hear and resolve any disputes arising out of this Protective Order.

9 (c) Successors. This Order shall be binding upon the Parties hereto, their  
10 attorneys, and their successors, executors, personal representatives, administrators, heirs, legal  
11 representatives, assigns, subsidiaries, divisions, employees, agents, retained consultants and  
12 experts, and any persons or organizations over which they have direct control.

13 (d) Right to Assert Other Objections. By stipulating to the entry of this  
14 Protective Order, no Party waives any right it otherwise would have to object to disclosing or  
15 producing any information or item. Similarly, no Party waives any right to object on any ground  
16 to use in evidence of any of the material covered by this Protective Order. This Order shall not  
17 constitute a waiver of the right of any Party to claim in this action or otherwise that any Discovery  
18 Material, or any portion thereof, is privileged or otherwise non-discoverable, or is not admissible  
19 in evidence in this action or any other proceeding.

20 (e) Burdens of Proof. Notwithstanding anything to the contrary above, nothing  
21 in this Protective Order shall be construed to change the burdens of proof or legal standards  
22 applicable in disputes regarding whether particular Discovery Material is confidential, which level  
23 of confidentiality is appropriate, whether disclosure should be restricted, and if so, what  
24 restrictions should apply.

25 (f) Modification by Court. This Order is subject to further court order based  
26 upon public policy or other considerations, and the Court may modify this Order *sua sponte* in the  
27 interests of justice. The United States District Court for the Northern District of California is  
28 responsible for the interpretation and enforcement of this Order. All disputes concerning

Protected Material, however designated, produced under the protection of this Order shall be resolved by the United States District Court for the Northern District of California.

(g) Discovery Rules Remain Unchanged. Nothing herein shall alter or change in any way the discovery provisions of the Federal Rules of Civil Procedure, the Local Rules for the United States District Court for Northern District of California, or the Court's own orders. Identification of any individual pursuant to this Protective Order does not make that individual available for deposition or any other form of discovery outside of the restrictions and procedures of the Federal Rules of Civil Procedure, the Local Rules for the United States District Court for Northern District of California, or the Court's own orders.

IT IS SO STIPULATED, THROUGH COUNSEL OF RECORD.

DATED: September 6, 2024

/s/ Fred I. Williams

Attorneys for Plaintiff

DATED: September 6, 2024

/s/ Michael D. Jay

Attorneys for Defendant

PURSUANT TO STIPULATION, IT IS SO ORDERED.

DATED: \_\_\_\_\_

\_\_\_\_\_  
Honorable Yvonne Gonzalez Rogers

United States District Court  
Northern District of California

**EXHIBIT A**

I, \_\_\_\_\_, acknowledge and declare that I have received a copy of the Protective Order (“Order”) in Gesture Technology Partners, LLC v. Apple Inc., United States District Court, Northern District of California, Civil Action No. 4:22-CV-04806-YGR. Having read and understood the terms of the Order, I agree to be bound by the terms of the Order and consent to the jurisdiction of said Court for the purpose of any proceeding to enforce the terms of the Order.

Name of individual: \_\_\_\_\_

Present occupation/job description: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Name of Company or Firm: \_\_\_\_\_

Address: \_\_\_\_\_

Dated: \_\_\_\_\_

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[Signature]

# ATTACHMENT 2

United States District Court  
Northern District of California

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Attorneys for Plaintiff Gesture Technology Partners, LLC

**IN THE UNITED STATES DISTRICT COURT  
FOR THE NORTHERN DISTRICT OF CALIFORNIA  
OAKLAND DIVISION**

GESTURE TECHNOLOGY PARTNERS,  
LLC,

Plaintiff,

v.

APPLE, INC.,

Defendant.

C.A. NO. 4:22-cv-04806-YGR

**PLAINTIFF GTP'S FIRST AMENDED  
INFRINGEMENT CONTENTIONS**

**Judge: Hon. Yvonne Gonzalez Rogers**

1 Plaintiff Gesture Technology Partners, LLC (“GTP”) provides the following disclosure of  
2 asserted claims and infringement contentions pursuant to the Local Patent Rules.

3 **A. Asserted Claims [Patent L.R. 3-1(a)]**

4 Defendant Apple, Inc. (“Apple”) infringes claim 4 of U.S. Patent No. 8,878,949 (“the ’949  
5 Patent”) under 35 U.S.C. §§ 271(a)-(c) and (f). GTP reserves the right to amend its infringement  
6 contentions under L.P.R. 3-6, including if Apple produces additional relevant documents or non-  
7 public information.

8 **B. Identification of Accused Instrumentalities [Patent L.R. 3-1(b)]**

9 The following chart identifies the Accused Instrumentalities along with specific  
10 components found in each Accused Instrumentality that form the basis of GTP’s infringement  
11 contentions against each Accused Instrumentality. Each Accused Instrumentality identified in the  
12 below chart infringes claim 4 of the ’949 Patent. The Accused Instrumentalities include all related  
13 software for the hardware components identified in the chart below, as well as any other hardware  
14 and software utilized by the Accused Instrumentalities that is integral to either the systems that  
15 employ those hardware components or the functionalities detailed in the attached claim chart.  
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Device Model	“Cameras and Sensors”	“Processors or Systems-On-Chips”	Year <sup>1</sup>
<b>Apple iPhone 6s<sup>2</sup></b>	<p>Screen-Side Camera - 5 MP, f/2.2, 31mm (standard); Face detection, HDR, panorama; 720p@30fps</p> <p>Non-Screen-Side Camera - 12 MP, f/2.2, 29mm (standard), 1/3", 1.22µm, PDAF; Dual-LED dual-tone flash, HDR; 4K@30fps, 1080p@60fps, 1080p@120fps, 720p@240fps</p> <p>Proximity Sensor</p> <p>Ambient Light Sensor</p> <p>Backside Illumination Sensor</p>	<p>Chipset - Apple A9 (14 nm)</p> <p>CPU - Dual-core 1.84 GHz Twister</p> <p>GPU - PowerVR GT7600 (six-core graphics)</p>	2015
<b>Apple iPhone 6s Plus<sup>3</sup></b>	<p>Screen-Side Camera - 5 MP, f/2.2, 31mm (standard); Face detection, HDR, panorama; 720p@30fps</p> <p>Non-Screen-Side Camera - 12 MP, f/2.2, 29mm (standard), 1/3", 1.22µm, PDAF, OIS; Dual-LED dual-tone flash, HDR; 4K@30fps, 1080p@60fps, 1080p@120fps, 720p@240fps</p> <p>Proximity Sensor</p> <p>Ambient Light Sensor</p> <p>Backside Illumination Sensor</p>	<p>Chipset - Apple A9 (14 nm)</p> <p>CPU - Dual-core 1.84 GHz Twister</p> <p>GPU - PowerVR GT7600 (six-core graphics)</p>	2015

<sup>1</sup> See [https://support.apple.com/en\\_US/specs/iphone](https://support.apple.com/en_US/specs/iphone); [https://support.apple.com/en\\_US/specs/ipad](https://support.apple.com/en_US/specs/ipad)

<sup>2</sup> See [https://support.apple.com/kb/SP705?viewlocale=en\\_US&locale=en\\_US](https://support.apple.com/kb/SP705?viewlocale=en_US&locale=en_US);

[https://www.gsmarena.com/apple\\_iphone\\_6s-7242.php](https://www.gsmarena.com/apple_iphone_6s-7242.php)

<sup>3</sup> See [https://support.apple.com/kb/SP727?viewlocale=en\\_US&locale=en\\_US](https://support.apple.com/kb/SP727?viewlocale=en_US&locale=en_US);

[https://www.gsmarena.com/apple\\_iphone\\_6s\\_plus-7243.php](https://www.gsmarena.com/apple_iphone_6s_plus-7243.php)



Device Model	“Cameras and Sensors”	“Processors or Systems-On-Chips”	Year <sup>1</sup>
Apple iPhone SE <sup>4</sup>	<p>Screen-Side Camera - 1.2 MP, f/2.4, 31mm (standard); Face detection, HDR, panorama; 720p@30fps</p> <p>Non-Screen-Side Camera - 12 MP, f/2.2, 29mm (standard), 1/3", 1.22µm, PDAF; Dual-LED dual-tone flash, HDR; 4K@30fps, 1080p@30/60fps, 1080p@120fps, 720p@240fps</p> <p>Proximity Sensor</p> <p>Ambient Light Sensor</p> <p>Backside Illumination Sensor</p>	<p>Chipset - Apple A9 (14 nm)</p> <p>CPU - Dual-core 1.84 GHz Twister</p> <p>GPU - PowerVR GT7600 (six-core graphics)</p>	2016
Apple iPhone 7 <sup>5</sup>	<p>Screen-Side Camera - 7 MP, f/2.2, 32mm (standard); Face detection, HDR, panorama; 1080p@30fps</p> <p>Non-Screen-Side Camera - 12 MP, f/1.8, 28mm (wide), 1/3", PDAF, OIS; Quad-LED dual-tone flash, HDR; 4K@30fps, 1080p@30/60/120fps, 720p@240fps</p> <p>Proximity Sensor</p> <p>Ambient Light Sensor</p> <p>Backside Illumination Sensor</p>	<p>Chipset - Apple A10 Fusion (16 nm)</p> <p>CPU - Quad-core 2.34 GHz (2x Hurricane + 2x Zephyr)</p> <p>GPU - PowerVR Series7XT Plus (six-core graphics)</p>	2016

<sup>4</sup> See [https://support.apple.com/kb/SP738?viewlocale=en\\_US&locale=en\\_US](https://support.apple.com/kb/SP738?viewlocale=en_US&locale=en_US); [https://www.gsmarena.com/apple\\_iphone\\_se-7969.php](https://www.gsmarena.com/apple_iphone_se-7969.php)

<sup>5</sup>

Device Model	“Cameras and Sensors”	“Processors or Systems-On-Chips”	Year <sup>1</sup>
<b>Apple iPhone 7 Plus<sup>6</sup></b>	<p>Screen-Side Camera - 7 MP, f/2.2, 32mm (standard); Face detection, HDR; 1080p@30fps</p> <p>Non-Screen-Side Camera - 12 MP, f/1.8, 28mm (wide), 1/3", PDAF, OIS, 12 MP, f/2.8, 56mm (telephoto), 1/3.6", AF, 2x optical zoom; Quad-LED dual-tone flash, HDR; 4K@30fps, 1080p@30/60/120fps, 720p@240fps</p> <p>Proximity Sensor</p> <p>Ambient Light Sensor</p> <p>Backside Illumination Sensor</p>	<p>Chipset - Apple A10 Fusion (16 nm)</p> <p>CPU - Quad-core 2.34 GHz (2x Hurricane + 2x Zephyr)</p> <p>GPU - PowerVR Series7XT Plus (six-core graphics)</p>	2016
<b>Apple iPhone 8<sup>7</sup></b>	<p>Screen-Side Camera - 7 MP, f/2.2; Face detection, HDR, panorama; 1080p@30fps</p> <p>Non-Screen-Side Camera - 12 MP, f/1.8, 28mm (wide), PDAF, OIS; Quad-LED dual-tone flash, HDR; 4K@24/30/60fps, 1080p@30/60/120/240fps</p> <p>Proximity Sensor</p> <p>Ambient Light Sensor</p>	<p>Chipset - Apple A11 Bionic (10 nm)</p> <p>CPU - Hexa-core (2x Monsoon + 4x Mistral)</p> <p>GPU - Apple GPU (three-core graphics)</p>	2017

<sup>6</sup> See [https://support.apple.com/kb/SP744?viewlocale=en\\_US&locale=en\\_US](https://support.apple.com/kb/SP744?viewlocale=en_US&locale=en_US); [https://www.gsmarena.com/apple\\_iphone\\_7\\_plus-8065.php](https://www.gsmarena.com/apple_iphone_7_plus-8065.php)

<sup>7</sup> See [https://support.apple.com/kb/SP767?viewlocale=en\\_US&locale=en\\_US](https://support.apple.com/kb/SP767?viewlocale=en_US&locale=en_US); [https://www.gsmarena.com/apple\\_iphone\\_8-8573.php](https://www.gsmarena.com/apple_iphone_8-8573.php)

Device Model	“Cameras and Sensors”	“Processors or Systems-On-Chips”	Year <sup>1</sup>
<b>Apple iPhone 8 Plus<sup>8</sup></b>	<p>Screen-Side Camera - 7 MP, f/2.2, 32mm (standard); Face detection, HDR; 1080p@30fps</p> <p>Non-Screen-Side Camera - 12 MP, f/1.8, 28mm (wide), PDAF, OIS, 12 MP, f/2.8, 57mm (telephoto), PDAF, 2x optical zoom; Quad-LED dual-tone flash, HDR; 4K@24/30/60fps, 1080p@30/60/120/240fps</p> <p>Proximity Sensor</p> <p>Ambient Light Sensor</p>	<p>Chipset - Apple A11 Bionic (10 nm)</p> <p>CPU - Hexa-core (2x Monsoon + 4x Mistral)</p> <p>GPU - Apple GPU (three-core graphics)</p>	2017
<b>Apple iPhone X<sup>9</sup></b>	<p>Screen-Side Camera - 7 MP, f/2.2, 32mm (standard), SL 3D, (depth/biometrics sensor); HDR; 1080p@30fps</p> <p>Non-Screen-Side Camera - 12 MP, f/1.8, 28mm (wide), 1/3", 1.22µm, dual pixel PDAF, OIS, 12 MP, f/2.4, 52mm (telephoto), 1/3.4", 1.0µm, PDAF, OIS, 2x optical zoom; Quad-LED dual-tone flash, HDR (photo/panorama), panorama, HDR; 4K@24/30/60fps, 1080p@30/60/120/240fps</p> <p>Proximity Sensor</p> <p>Ambient Light Sensor</p> <p>Backside Illumination Sensor</p> <p>True Depth Camera including flood illuminator, infrared dot projector, and IR camera</p> <p>Face ID</p>	<p>Chipset - Apple A11 Bionic (10 nm)</p> <p>CPU - Hexa-core 2.39 GHz (2x Monsoon + 4x Mistral)</p> <p>GPU - Apple GPU (three-core graphics)</p>	2017

<sup>8</sup> See [https://support.apple.com/kb/SP768?viewlocale=en\\_US&locale=en\\_US](https://support.apple.com/kb/SP768?viewlocale=en_US&locale=en_US); [https://www.gsmarena.com/apple\\_iphone\\_8\\_plus-8131.php](https://www.gsmarena.com/apple_iphone_8_plus-8131.php)

<sup>9</sup> See [https://support.apple.com/kb/SP770?viewlocale=en\\_US&locale=en\\_US](https://support.apple.com/kb/SP770?viewlocale=en_US&locale=en_US); [https://www.gsmarena.com/apple\\_iphone\\_x-8858.php](https://www.gsmarena.com/apple_iphone_x-8858.php)

Device Model	“Cameras and Sensors”	“Processors or Systems-On-Chips”	Year <sup>1</sup>
<b>Apple iPhone XR<sup>10</sup></b>	<p>Screen-Side Camera - 7 MP, f/2.2, 32mm (standard), SL 3D, (depth/biometrics sensor); HDR; 1080p@60fps</p> <p>Non-Screen-Side Camera - 12 MP, f/1.8, 26mm (wide), 1/2.55", 1.4µm, PDAF, OIS; Quad-LED dual-tone flash, HDR; 4K@24/30/60fps, 1080p@30/60/120/240fps</p> <p>Proximity Sensor</p> <p>Ambient Light Sensor</p>	<p>Chipset - Apple A12 Bionic (7 nm)</p> <p>CPU - Hexa-core (2x2.5 GHz Vortex + 4x1.6 GHz Tempest)</p> <p>GPU - Apple GPU (4-core graphics)</p>	2018
<b>Apple iPhone XS<sup>11</sup></b>	<p>Screen-Side Camera - 7 MP, f/2.2, 32mm (standard), SL 3D, (depth/biometrics sensor); HDR; 1080p@30/60fps, gyro-EIS</p> <p>Non-Screen-Side Camera - 12 MP, f/1.8, 26mm (wide), 1/2.55", 1.4µm, dual pixel PDAF, OIS, 12 MP, f/2.4, 52mm (telephoto), 1/3.4", 1.0µm, PDAF, OIS, 2x optical zoom; Quad-LED dual-tone flash, HDR (photo/panorama); 4K@24/30/60fps, 1080p@30/60/120/240fps</p> <p>Proximity Sensor</p> <p>Ambient Light Sensor</p> <p>Backside Illumination Sensor</p> <p>True Depth Camera including flood illuminator, infrared dot projector, and IR camera</p> <p>Face ID</p>	<p>Chipset - Apple A12 Bionic (7 nm)</p> <p>CPU - Hexa-core (2x2.5 GHz Vortex + 4x1.6 GHz Tempest)</p> <p>GPU - Apple GPU (4-core graphics)</p>	2018

<sup>10</sup> See [https://support.apple.com/kb/SP781?viewlocale=en\\_US&locale=en\\_US](https://support.apple.com/kb/SP781?viewlocale=en_US&locale=en_US); [https://www.gsmarena.com/apple\\_iphone\\_xr-9320.php](https://www.gsmarena.com/apple_iphone_xr-9320.php)

<sup>11</sup> See [https://support.apple.com/kb/SP779?viewlocale=en\\_US&locale=en\\_US](https://support.apple.com/kb/SP779?viewlocale=en_US&locale=en_US); [https://www.gsmarena.com/apple\\_iphone\\_xs-9318.php](https://www.gsmarena.com/apple_iphone_xs-9318.php)

Device Model	“Cameras and Sensors”	“Processors or Systems-On-Chips”	Year <sup>1</sup>
Apple iPhone XS Max <sup>12</sup>	<p>Screen-Side Camera - 7 MP, f/2.2, 32mm (standard), SL 3D, (depth/biometrics sensor); HDR; 1080p@30/60fps, gyro-EIS</p> <p>Non-Screen-Side Camera - 12 MP, f/1.8, 26mm (wide), 1/2.55", 1.4µm, dual pixel PDAF, OIS, 12 MP, f/2.4, 52mm (telephoto), 1/3.4", 1.0µm, PDAF, OIS, 2x optical zoom; Quad-LED dual-tone flash, HDR (photo/panorama); 4K@24/30/60fps, 1080p@30/60/120/240fps</p> <p>Proximity Sensor</p> <p>Ambient Light Sensor</p> <p>Backside Illumination Sensor</p> <p>True Depth Camera including flood illuminator, infrared dot projector, and IR camera</p> <p>Face ID</p>	<p>Chipset - Apple A12 Bionic (7 nm)</p> <p>CPU - Hexa-core (2x2.5 GHz Vortex + 4x1.6 GHz Tempest)</p> <p>GPU - Apple GPU (4-core graphics)</p>	2018

<sup>12</sup> See [https://support.apple.com/kb/SP780?viewlocale=en\\_US&locale=en\\_US](https://support.apple.com/kb/SP780?viewlocale=en_US&locale=en_US); [https://www.gsmarena.com/apple\\_iphone\\_xs\\_max-9319.php](https://www.gsmarena.com/apple_iphone_xs_max-9319.php)

Device Model	“Cameras and Sensors”	“Processors or Systems-On-Chips”	Year <sup>1</sup>
Apple iPhone 11 <sup>13</sup>	<p>Screen-Side Camera - 12 MP, f/2.2, 23mm (wide), 1/3.6", SL 3D, (depth/biometrics sensor); HDR; 4K@24/30/60fps, 1080p@30/60/120fps, gyro-EIS</p> <p>Non-Screen-Side Camera - 12 MP, f/1.8, 26mm (wide), 1/2.55", 1.4µm, dual pixel PDAF, OIS, 12 MP, f/2.4, 120°, 13mm (ultrawide), 1/3.6"; Dual-LED dual-tone flash, HDR (photo/panorama); 4K@24/30/60fps, 1080p@30/60/120/240fps</p> <p>Proximity Sensor</p> <p>Ambient Light Sensor</p> <p>True Depth Camera including flood illuminator, infrared dot projector, and IR camera</p> <p>Face ID</p>	<p>Chipset - Apple A13 Bionic (7 nm+)</p> <p>CPU - Hexa-core (2x2.65 GHz Lightning + 4x1.8 GHz Thunder)</p> <p>GPU - Apple GPU (4-core graphics)</p>	2019

<sup>13</sup> See [https://support.apple.com/kb/SP804?viewlocale=en\\_US&locale=en\\_US](https://support.apple.com/kb/SP804?viewlocale=en_US&locale=en_US); [https://www.gsmarena.com/apple\\_iphone\\_11-9848.php](https://www.gsmarena.com/apple_iphone_11-9848.php)

Device Model	“Cameras and Sensors”	“Processors or Systems-On-Chips”	Year <sup>1</sup>
Apple iPhone 11 Pro <sup>14</sup>	<p>Screen-Side Camera - 12 MP, f/2.2, 23mm (wide), 1/3.6" SL 3D, (depth/biometrics sensor); HDR; 4K@24/30/60fps, 1080p@30/60/120fps, gyro-EIS</p> <p>Non-Screen-Side Camera - 12 MP, f/1.8, 26mm (wide), 1/2.55", 1.4µm, dual pixel PDAF, OIS, 12 MP, f/2.0, 52mm (telephoto), 1/3.4", 1.0µm, PDAF, OIS, 2x optical zoom, 12 MP, f/2.4, 120°, 13mm (ultrawide), 1/3.6"; Dual-LED dual-tone flash, HDR (photo/panorama); 4K@24/30/60fps, 1080p@30/60/120/240fps</p> <p>Proximity Sensor</p> <p>Ambient Light Sensor</p> <p>True Depth Camera including flood illuminator, infrared dot projector, and IR camera</p> <p>Face ID</p>	<p>Chipset - Apple A13 Bionic (7 nm+)</p> <p>CPU - Hexa-core (2x2.65 GHz Lightning + 4x1.8 GHz Thunder)</p> <p>GPU - Apple GPU (4-core graphics)</p>	2019

<sup>14</sup> See [https://support.apple.com/kb/SP805?viewlocale=en\\_US&locale=en\\_US](https://support.apple.com/kb/SP805?viewlocale=en_US&locale=en_US); [https://www.gsmarena.com/apple\\_iphone\\_11\\_pro-9847.php](https://www.gsmarena.com/apple_iphone_11_pro-9847.php)

Device Model	“Cameras and Sensors”	“Processors or Systems-On-Chips”	Year <sup>1</sup>
<b>Apple iPhone 11 Pro Max<sup>15</sup></b>	<p>Screen-Side Camera - 12 MP, f/2.2, 23mm (wide), 1/3.6", SL 3D, (depth/biometrics sensor); HDR; 4K@24/30/60fps, 1080p@30/60/120fps, gyro-EIS</p> <p>Non-Screen-Side Camera - 12 MP, f/1.8, 26mm (wide), 1/2.55", 1.4µm, dual pixel PDAF, OIS, 12 MP, f/2.0, 52mm (telephoto), 1/3.4", 1.0µm, PDAF, OIS, 2x optical zoom, 12 MP, f/2.4, 120°, 13mm (ultrawide), 1/3.6"; Dual-LED dual-tone flash, HDR (photo/panorama); 4K@24/30/60fps, 1080p@30/60/120/240fps</p> <p>Proximity Sensor</p> <p>Ambient Light Sensor</p> <p>True Depth Camera including flood illuminator, infrared dot projector, and IR camera</p> <p>Face ID</p>	<p>Chipset - Apple A13 Bionic (7 nm+)</p> <p>CPU - Hexa-core (2x2.65 GHz Lightning + 4x1.8 GHz Thunder)</p> <p>GPU - Apple GPU (4-core graphics)</p>	2019
<b>Apple iPhone SE (2<sup>nd</sup> Generation)<sup>16</sup></b>	<p>Screen-Side Camera - 7 MP, f/2.2; HDR; 1080p@30fps; gyro-EIS</p> <p>Non-Screen-Side Camera - 12 MP, f/1.8 (wide), PDAF, OIS; Quad-LED dual-tone flash, HDR, panorama; 4K@24/30/60fps, 1080p@30/60/120/240fps, HDR, OIS</p> <p>Proximity Sensor</p> <p>Ambient Light Sensor</p>	<p>Chipset - Apple A13 Bionic (7 nm+)</p> <p>CPU - Hexa-core (2x2.65 GHz Lightning + 4x1.8 GHz Thunder)</p> <p>GPU - Apple GPU (4-core graphics)</p>	2020

<sup>15</sup> See [https://support.apple.com/kb/SP806?viewlocale=en\\_US&locale=en\\_US](https://support.apple.com/kb/SP806?viewlocale=en_US&locale=en_US); [https://www.gsmarena.com/apple\\_iphone\\_11\\_pro\\_max-9846.php](https://www.gsmarena.com/apple_iphone_11_pro_max-9846.php)

<sup>16</sup> See [https://support.apple.com/kb/SP820?viewlocale=en\\_US&locale=en\\_US](https://support.apple.com/kb/SP820?viewlocale=en_US&locale=en_US); [https://www.gsmarena.com/apple\\_iphone\\_se\\_\(2020\)-10170.php](https://www.gsmarena.com/apple_iphone_se_(2020)-10170.php)



Device Model	“Cameras and Sensors”	“Processors or Systems-On-Chips”	Year <sup>1</sup>
<b>Apple iPad mini 4<sup>17</sup></b>	Screen-Side Camera - 1.2 MP, f/2.2, 31mm (standard); HDR; 720p@30fps  Non-Screen-Side Camera - 8 MP, f/2.4, 32mm (standard), 1.12µm, AF; HDR; 1080p@30fps  Light sensor	Chipset - Apple A8 (20 nm) CPU - Dual-core 1.5 GHz Typhoon GPU - PowerVR GX6450 (quad-core graphics)	2015
<b>Apple iPad Pro 12.9-inch (2015)<sup>18</sup></b>	Screen-Side Camera - 1.2 MP; face detection, HDR; 720p@30fps  Non-Screen-Side Camera - 8 MP, f/2.4, 31mm (standard), 1.12µm, AF; HDR; 1080p@30fps, 720p@120fps, HDR  Light Sensor	Chipset - Apple A9X (16 nm) CPU - Dual-core 2.26 GHz (Twister) GPU - PowerVR Series 7 (12-core graphics)	2015
<b>Apple iPad Pro 9.7-inch (2016)<sup>19</sup></b>	Screen-Side Camera - 5 MP, f/2.2, 31mm (standard); Face detection, HDR, panorama; 1080p@30fps  Non-Screen-Side Camera - 12 MP, f/2.2, 29mm (standard), 1/3", 1.22µm, PDAF; Dual-LED dual-tone flash, HDR; 4K@30fps, 1080p@30/60fps, 1080p@120fps, 720p@240fps  Ambient Light Sensor	Chipset - Apple A9X (16 nm) CPU - Dual-core 2.16 GHz (Twister) GPU - PowerVR Series 7 (12-core graphics)	2016

<sup>17</sup> See [https://support.apple.com/kb/SP725?locale=en\\_US](https://support.apple.com/kb/SP725?locale=en_US); [https://www.gsmarena.com/apple\\_ipad\\_mini\\_4\\_\(2015\)-7561.php](https://www.gsmarena.com/apple_ipad_mini_4_(2015)-7561.php)

<sup>18</sup> See [https://www.gsmarena.com/apple\\_ipad\\_pro\\_12\\_9\\_\(2015\)-7562.php](https://www.gsmarena.com/apple_ipad_pro_12_9_(2015)-7562.php)

<sup>19</sup> See [https://support.apple.com/kb/SP739?viewlocale=en\\_US&locale=en\\_US](https://support.apple.com/kb/SP739?viewlocale=en_US&locale=en_US); [https://www.gsmarena.com/apple\\_iphone\\_7-8064.php](https://www.gsmarena.com/apple_iphone_7-8064.php)

Device Model	“Cameras and Sensors”	“Processors or Systems-On-Chips”	Year <sup>1</sup>
<b>Apple iPad 9.7-inch (5<sup>th</sup> Generation)<sup>20</sup></b>	<p>Screen-Side Camera - 1.2 MP, f/2.2, 31mm (standard); Face detection, HDR, panorama; 720p@30fps</p> <p>Non-Screen-Side Camera - 8 MP, f/2.4, 31mm (standard), 1.12µm, AF; HDR; 1080p@30fps, 720p@120fps, HDR</p> <p>Ambient Light Sensor</p>	<p>Chipset - Apple A9 (14 nm)</p> <p>CPU - Dual-core 1.84 GHz (Twister)</p> <p>GPU - PowerVR GT7600 (six-core graphics)</p>	2017
<b>Apple iPad Pro 10.5-inch (2017)<sup>21</sup></b>	<p>Screen-Side Camera - 7 MP, f/2.2, 32mm (standard); Face detection, HDR, panorama; 1080p@30fps</p> <p>Non-Screen-Side Camera - 12 MP, f/1.8, 1/3", PDAF, OIS; Quad-LED dual-tone flash, HDR; 4K@30fps, 1080p@30/60fps, 1080p@120fps, 720p@240fps</p> <p>Ambient Light Sensor</p> <p>Backside Illumination Sensor</p>	<p>Chipset - Apple A10X Fusion (10 nm)</p>	2017
<b>Apple iPad Pro 12.9-inch (2<sup>nd</sup> Generation)<sup>22</sup></b>	<p>Screen-Side Camera - 7 MP, f/2.2, 32mm (standard); Face detection, HDR, panorama; 1080p@30fps</p> <p>Non-Screen-Side Camera - 12 MP, f/1.8, 1/3", PDAF, OIS; Quad-LED dual-tone flash, HDR; 4K@30fps, 1080p@30/60fps, 1080p@120fps, 720p@240fps</p> <p>Ambient Light Sensor</p> <p>Backside Illumination Sensor</p>	<p>Chipset - Apple A10X Fusion (10 nm)</p>	2017

<sup>20</sup> See [https://support.apple.com/kb/SP751?viewlocale=en\\_US&locale=en\\_US](https://support.apple.com/kb/SP751?viewlocale=en_US&locale=en_US); [https://www.gsmarena.com/apple\\_ipad\\_9\\_7\\_\(2017\)-8620.php](https://www.gsmarena.com/apple_ipad_9_7_(2017)-8620.php)

<sup>21</sup> See [https://support.apple.com/kb/SP762?viewlocale=en\\_US&locale=en\\_US](https://support.apple.com/kb/SP762?viewlocale=en_US&locale=en_US); [https://www.gsmarena.com/apple\\_ipad\\_pro\\_10\\_5\\_\(2017\)-8716.php](https://www.gsmarena.com/apple_ipad_pro_10_5_(2017)-8716.php)

<sup>22</sup> See [https://support.apple.com/kb/SP761?viewlocale=en\\_US&locale=en\\_US](https://support.apple.com/kb/SP761?viewlocale=en_US&locale=en_US); [https://www.gsmarena.com/apple\\_ipad\\_pro\\_12\\_9\\_\(2017\)-8717.php](https://www.gsmarena.com/apple_ipad_pro_12_9_(2017)-8717.php)

Device Model	“Cameras and Sensors”	“Processors or Systems-On-Chips”	Year <sup>1</sup>
<b>Apple iPad 9.7-inch (6<sup>th</sup> Generation)</b> <sup>23</sup>	<p>Screen-Side Camera - 1.2 MP, f/2.2, 31mm (standard); Face detection, HDR, panorama; 720p@30fps</p> <p>Non-Screen-Side Camera - 8 MP, f/2.4, 31mm (standard), 1.12µm, AF; HDR; 1080p@30fps, 720p@120fps</p>	<p>Chipset - Apple A10 Fusion (16 nm)</p> <p>CPU - Quad-core 2.34 GHz (2x Hurricane + 2x Zephyr)</p> <p>GPU - PowerVR Series7XT Plus (six-core graphics)</p>	2018
<b>Apple iPad Pro 11-inch (1<sup>st</sup> Generation)</b> <sup>24</sup>	<p>Screen-Side Camera - 7 MP, f/2.2, 32mm (standard); Face detection, HDR, panorama; 1080p@30fps</p> <p>Non-Screen-Side Camera - 12 MP, f/1.8, 29mm (standard), 1/3", 1.22µm, PDAF; Quad-LED dual-tone flash, HDR; 4K@30/60fps, 1080p@30/60/120fps, 720p@240fps</p> <p>Proximity Sensor</p> <p>Ambient Light Sensor</p> <p>Backside Illumination Sensor</p> <p>True Depth Camera including flood illuminator, infrared dot projector, and IR camera</p> <p>Face ID</p>	<p>Chipset - Apple A12X Bionic (7 nm)</p> <p>CPU - Octa-core (4x2.5 GHz Vortex + 4x1.6 GHz Tempest)</p> <p>GPU - Apple GPU (7-core graphics)</p>	2018

<sup>23</sup> See [https://support.apple.com/kb/SP774?viewlocale=en\\_US&locale=en\\_US](https://support.apple.com/kb/SP774?viewlocale=en_US&locale=en_US); [https://www.gsmarena.com/apple\\_ipad\\_9\\_7\\_\(2018\)-9142.php](https://www.gsmarena.com/apple_ipad_9_7_(2018)-9142.php)

<sup>24</sup> See [https://support.apple.com/kb/SP784?viewlocale=en\\_US&locale=en\\_US](https://support.apple.com/kb/SP784?viewlocale=en_US&locale=en_US); [https://www.gsmarena.com/apple\\_ipad\\_pro\\_11\\_\(2018\)-9386.php](https://www.gsmarena.com/apple_ipad_pro_11_(2018)-9386.php)

Device Model	“Cameras and Sensors”	“Processors or Systems-On-Chips”	Year <sup>1</sup>
<b>Apple iPad Pro 12.9-inch (3<sup>rd</sup> Generation)</b> <sup>25</sup>	<p>Screen-Side Camera - 7 MP, f/2.2, 32mm (standard); Face detection, HDR, panorama; 1080p@30fps</p> <p>Non-Screen-Side Camera - 12 MP, f/1.8, 29mm (standard), 1/3", 1.22µm, PDAF; Quad-LED dual-tone flash, HDR; 4K@30/60fps, 1080p@30/60/120fps, 720p@240fps</p> <p>Proximity Sensor</p> <p>Ambient Light Sensor</p> <p>Backside Illumination Sensor</p> <p>True Depth Camera including flood illuminator, infrared dot projector, and IR camera</p> <p>Face ID</p>	<p>Chipset - Apple A12X Bionic (7 nm)</p> <p>CPU - Octa-core (4x2.5 GHz Vortex + 4x1.6 GHz Tempest)</p> <p>GPU - Apple GPU (7-core graphics)</p>	2018
<b>Apple iPad Air (3<sup>rd</sup> Generation)</b> <sup>26</sup>	<p>Screen-Side Camera - 7 MP, f/2.2, 31mm (standard); HDR; 1080p@30fps</p> <p>Non-Screen-Side Camera - 8 MP, f/2.4, 31mm (standard), 1.12µm, AF; HDR; 1080p@30fps</p> <p>Ambient Light Sensor</p>	<p>Chipset - Apple A12 Bionic (7 nm)</p> <p>CPU - Hexa-core (2x2.5 GHz Vortex + 4x1.6 GHz Tempest)</p> <p>GPU - Apple GPU (4-core graphics)</p>	2019

<sup>25</sup> See [https://support.apple.com/kb/SP785?viewlocale=en\\_US&locale=en\\_US](https://support.apple.com/kb/SP785?viewlocale=en_US&locale=en_US); [https://www.gsmarena.com/apple\\_ipad\\_pro\\_12\\_9\\_\(2018\)-9387.php](https://www.gsmarena.com/apple_ipad_pro_12_9_(2018)-9387.php)

<sup>26</sup> See [https://support.apple.com/kb/SP787?viewlocale=en\\_US&locale=en\\_US](https://support.apple.com/kb/SP787?viewlocale=en_US&locale=en_US); [https://www.gsmarena.com/apple\\_ipad\\_air\\_\(2019\)-9638.php](https://www.gsmarena.com/apple_ipad_air_(2019)-9638.php)

Device Model	“Cameras and Sensors”	“Processors or Systems-On-Chips”	Year <sup>1</sup>
<b>Apple iPad mini (5<sup>th</sup> Generation)</b> <sup>27</sup>	Screen-Side Camera - 7 MP, f/2.2, 31mm (standard); HDR; 1080p@30fps  Non-Screen-Side Camera - 8 MP, f/2.4, 32mm (standard), 1.12µm, AF; HDR; 1080p@30fps  Ambient Light Sensor	Chipset - Apple A12 Bionic (7 nm) CPU - Hexa-core (2x2.5 GHz Vortex + 4x1.6 GHz Tempest) GPU - Apple GPU (4-core graphics)	2019
<b>Apple iPad (7<sup>th</sup> Generation)</b> <sup>28</sup>	Screen-Side Camera - 1.2 MP, f/2.2, 31mm (standard); HDR; 720p@30fps  Non-Screen-Side Camera - 8 MP, f/2.4, 31mm (standard), 1.12µm, AF; HDR; 1080p@30fps, 720p@120fps  Ambient Light Sensor	Chipset - Apple A10 Fusion (16 nm) CPU - Quad-core 2.34 GHz (2x Hurricane + 2x Zephyr) GPU - PowerVR Series7XT Plus (six-core graphics)	2019

<sup>27</sup> See [https://support.apple.com/kb/SP788?viewlocale=en\\_US&locale=en\\_US](https://support.apple.com/kb/SP788?viewlocale=en_US&locale=en_US); [https://www.gsmarena.com/apple\\_ipad\\_mini\\_\(2019\)-9637.php](https://www.gsmarena.com/apple_ipad_mini_(2019)-9637.php)

<sup>28</sup> See [https://support.apple.com/kb/SP807?viewlocale=en\\_US&locale=en\\_US](https://support.apple.com/kb/SP807?viewlocale=en_US&locale=en_US); [https://www.gsmarena.com/apple\\_ipad\\_10\\_2\\_\(2019\)-9857.php](https://www.gsmarena.com/apple_ipad_10_2_(2019)-9857.php)

Device Model	“Cameras and Sensors”	“Processors or Systems-On-Chips”	Year <sup>1</sup>
Apple iPad Pro 11 (2 <sup>nd</sup> Generation) <sup>29</sup>	<p>Screen-Side Camera - 7 MP, f/2.2; Face detection, HDR, panorama; 1080p@30/60fps</p> <p>Non-Screen-Side Camera - 12 MP, f/1.8, (wide), 1/3", 1.22µm, dual pixel PDAF, 10 MP, f/2.4, 11mm (ultrawide), TOF 3D LiDAR scanner (depth); Quad-LED dual-tone flash, HDR; 4K@24/30/60fps, 1080p@30/60/120/240fps; gyro-EIS</p> <p>Backside Illumination Sensor</p> <p>Ambient Light Sensor</p> <p>True Depth Camera including flood illuminator, infrared dot projector, and IR camera</p> <p>Face ID</p> <p>LiDAR Scanner</p>	<p>Chipset - Apple A12Z Bionic</p> <p>CPU - Octa-core (4x2.5 GHz Vortex + 4x1.6 GHz Tempest)</p> <p>GPU - Apple GPU (8-core graphics)</p>	2020

<sup>29</sup> See [https://support.apple.com/kb/SP814?viewlocale=en\\_US&locale=en\\_US](https://support.apple.com/kb/SP814?viewlocale=en_US&locale=en_US); [https://www.gsmarena.com/apple\\_ipad\\_pro\\_11\\_\(2020\)-10137.php](https://www.gsmarena.com/apple_ipad_pro_11_(2020)-10137.php)

Device Model	“Cameras and Sensors”	“Processors or Systems-On-Chips”	Year <sup>1</sup>
Apple iPad Pro 12.9 (4 <sup>th</sup> Generation) <sup>30</sup>	<p>Screen-Side Camera - 7 MP, f/2.2; Face detection, HDR, panorama; 1080p@30/60fps</p> <p>Non-Screen-Side Camera - 12 MP, f/1.8, (wide), 1/3", 1.22µm, dual pixel PDAF, 10 MP, f/2.4, 11mm (ultrawide), TOF 3D LiDAR scanner (depth); Quad-LED dual-tone flash, HDR; 4K@24/30/60fps, 1080p@30/60/120/240fps; gyro-EIS</p> <p>Backside Illumination Sensor</p> <p>Ambient Light Sensor</p> <p>True Depth Camera including flood illuminator, infrared dot projector, and IR camera</p> <p>Face ID</p>	<p>Chipset - Apple A12Z Bionic</p> <p>CPU - Octa-core (4x2.5 GHz Vortex + 4x1.6 GHz Tempest)</p> <p>GPU - Apple GPU (8-core graphics)</p>	2020

### C. Claim Chart [Patent L.R. 3-1(c)]

A claim chart identifying specifically where each element of claim 4 of the '949 Patent is found within the Accused Instrumentalities is attached hereto as Exhibit A. The attached claim chart references the specific hardware components for each Accused Instrumentality as identified in the component chart presented in the above Identification of Accused Instrumentalities. Each element of each asserted claim in Exhibit A is claimed to infringe literally within each Accused Instrumentality. Discovery is ongoing and GTP reserves the right to amend and supplement its infringement contentions, including in response to the production of non-public information, confidential information, or source code.

<sup>30</sup> See [https://support.apple.com/kb/SP815?viewlocale=en\\_US&locale=en\\_US](https://support.apple.com/kb/SP815?viewlocale=en_US&locale=en_US); [https://www.gsmarena.com/apple\\_ipad\\_pro\\_12\\_9\\_\(2020\)-10136.php](https://www.gsmarena.com/apple_ipad_pro_12_9_(2020)-10136.php)

**D. Direct and Indirect Infringement [Patent L.R. 3-1(d)]<sup>31</sup>**

GTP contends that Apple directly infringes claim 4 of the '949 Patent. Apple has infringed claim 4 of the '949 Patent literally and/or under the doctrine of equivalents by making, using, selling, or offering to sell the foregoing equipment in the United States, as well as importing the foregoing equipment into the United States, during at least some time periods within February 4, 2015 to May 11, 2020.

GTP also contends that Apple indirectly infringed claim 4 of the '949 Patent because Apple's users, customers, and business partners were provided the Accused Instrumentalities by Apple during at least some time periods within February 4, 2015 to May 11, 2020. Apple actively encouraged and instructed these users, customers, and business partners to use the Accused Instrumentalities in ways that directly infringe claim 4 of the '949 Patent. Examples include Apple's online instructions on its website and app store for the Accused Instrumentalities, including instructions regarding the use of Apple's Face ID and Apple's Memojis, and Animojis (see, e.g., <https://support.apple.com/en-us/HT208986> and <https://support.apple.com/en-us/HT208109>), as well as information Apple provided to its business partners both publicly on its websites and privately related to APIs that are configured for recognizing gestures. Apple specifically intended and induced its users, customers, and business partners to make, use, offer to sell, or sell the portable device of at least claim 4 of the '949 Patent through the normal and customary use of the Accused Instrumentalities by the users, customers, and/or business partners.

With regard to third-party applications (e.g., TikTok Application, GoCam by Crunchfish, MOMAX cam by Crunchfish), Apple further induced the making and using of the accused systems by Apple's users, customers, and business partners (to whom Apple provides the third-party applications through Apple's App Store) in order for the users, customers, and business partners

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<sup>31</sup> Apple had knowledge of the '949 Patent for at least the reasons set forth herein, as well as in Section I.



1 to install and use one or more of the third-party applications on the Accused Instrumentalities. For  
 2 Apple's inducement with respect to third-party applications, the direct infringer is Apple's users,  
 3 customers, or business partners.

4  
 5 Apple also indirectly infringes through contributory infringement by providing or having  
 6 provided third-party applications (e.g., TikTok Application, GoCam by Crunchfish, MOMAX cam  
 7 by Crunchfish), or providing or having provided specific software components that are part of the  
 8 third-party applications, that are not a staple article of commerce and have no substantial non-  
 9 infringing use, in order to be combined by Apple's users, customers, and business partners with  
 10 the other claimed elements (e.g., Accused Instrumentalities) so as to assemble and make the  
 11 claimed portable device. The third-party applications are components since software may be a  
 12 "component" under section 271(c). *See, e.g., Robocast, Inc., v. Microsoft Corp.*, 21 F.Supp.3d  
 13 320, 331-32 (D. Del. 2014); *i4i Ltd. Partnership v. Microsoft Corp.*, 670 F. Supp. 2d 568, 580  
 14 (E.D. Tex. 2009), *aff'd*, 598 F.3d 831, 849 (Fed. Cir. 2010). The specific software components of  
 15 the third-party applications are also components, since software programs may be made up of  
 16 smaller software units, each of which may also be a "component" under the statute. *See Lucent*  
 17 *Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1320 (Fed. Cir. 2009) (concluding that proper  
 18 "component" for contributory infringement analysis was the date picker feature in Microsoft  
 19 Outlook, not Microsoft Outlook as a whole). In addition, "an infringer 'should not be permitted  
 20 to escape liability as a contributory infringer merely by embedding [the infringing apparatus] in a  
 21 larger product with some additional, separable feature before importing and selling it.'" *Id.*  
 22 (quoting *Ricoh Co. v. Quanta Computer Inc.*, 550 F.3d 1325, 1337 (Fed. Cir. 2008)). For Apple's  
 23 contributory infringement with respect to third-party applications, the direct infringer is Apple's  
 24 users, customers, or business partners.

25  
 26 GTP also contends that Apple infringes claim 4 of the '949 Patent under 35 U.S.C  
 27 §271(f)(1), by supplying or causing to be supplied in or from the United States (during at least  
 28

1 some time periods within February 4, 2015 to May 11, 2020) all or a substantial portion of the  
2 components of a claim 4 of the '949 Patent, where such components are uncombined in whole or  
3 in part, in such manner as to actively induce the combination of such components outside of the  
4 United States in a manner that would infringe the patent if such combination occurred within the  
5 United States. First, Apple supplies, or causes to be supplied, the foregoing equipment (e.g.,  
6 Accused Instrumentalities) to Apple's users, customers, or business partners outside the United  
7 States. In addition, Apple operates data centers in the United States where updates to Apple's iOS  
8 operating system as well as third-party applications (e.g., TikTok Application, GoCam by  
9 Crunchfish, MOMAX cam by Crunchfish) are supplied to Apple's users, customers, or business  
10 partners outside the United States. For example, under information and belief, in the United States  
11 Apple operates at least five data centers in or near the cities of Reno, Nevada; Maiden, North  
12 Carolina; Mesa, Arizona; Prineville, Oregon; and Newark, California. See  
13 <https://dgtlinfra.com/apple-data-center-locations/>. Under information and belief, Apple's United  
14 States based data centers provide Apple's iOS operating system as well as third-party applications  
15 to Apple's users, customers, or business partners outside the United States through Apple's App  
16 Store and Apple's operating system update processes. The Accused Instrumentalities, Apple's  
17 iOS operating system, and the third-party applications are each components that are uncombined  
18 in whole or in part, where the combination of such components outside of the United States would  
19 infringe claim 4 of the '949 Patent if such combination occurred within the United States. Unlike  
20 *Microsoft Corp. v. AT&T Corp.*, the copy of the iOS operating system, or third-party application,  
21 that Apple's users, customers, or business partners download from Apple's servers is what is  
22 installed in the Accused Instrumentality. See *Microsoft Corp. v. AT&T Corp.*, 550 U.S. 437, 442  
23 (2007) ("The master disk or electronic transmission Microsoft sends from the United States is  
24 never installed on any of the foreign-made computers in question. Instead, copies made abroad are  
25 used for installation. Because Microsoft does not export from the United States the copies actually  
26 installed, it does not 'suppl[y] ... from the United States' 'components' of the relevant computers,  
27 and therefore is not liable under § 271(f) as currently written."). In addition, unlike *Life*

1 *Technologies Corp. v. Promega Corp.*, Apple supplies the Accused Instrumentality, the iOS  
 2 operating system, and the 3<sup>rd</sup> party applications to Apple’s users, customers, or business partners  
 3 outside the United States. *See Life Technologies Corp. v. Promega Corp.*, 137 S. Ct. 734, 743  
 4 (2017) (a “substantial portion of the components of a patented invention” in Section 271(f)(1) had  
 5 “a quantitative, not a qualitative meaning” and did “not cover the supply of a single component of  
 6 a multicomponent invention.”). Here, Apple supplies the Accused Instrumentality, the iOS  
 7 operating system, and the third-party applications to Apple’s users, customers, or business partners  
 8 outside the United States. Even if Apple does not supply or cause to be supplied the foregoing  
 9 equipment (e.g., Accused Instrumentality) in or from the United States, Apple still provides the  
 10 iOS operating system, and the third-party applications to Apple’s users, customers, or business  
 11 partners outside the United States, which subjects Apple to liability under 35 U.S.C 271(f)(1).

12  
 13 GTP also contends that Apple infringes claim 4 of the ’949 Patent under 35 U.S.C  
 14 §271(f)(2), by supplying or causing to be supplied in or from the United States (during at least  
 15 some time periods within February 4, 2015 to May 11, 2020) the third-party applications (e.g.,  
 16 TikTok Application, GoCam by Crunchfish, MOMAX cam by Crunchfish) that are especially  
 17 made or especially adapted for use in the invention of claim 4 of the ’949 Patent, and are not a  
 18 staple article or commodity of commerce suitable for substantial noninfringing use, where the 3<sup>rd</sup>  
 19 party applications are uncombined in whole or in part, knowing that the third-party applications  
 20 are so made or adapted and intending that such component will be combined outside of the United  
 21 States in a manner that would infringe the patent if such combination occurred within the United  
 22 States. Apple operates data centers in the United States where third-party applications (e.g.,  
 23 TikTok Application, GoCam by Crunchfish, MOMAX cam by Crunchfish) are supplied to Apple’s  
 24 users, customers, or business partners outside the United States. For example, under information  
 25 and belief, in the United States Apple operates at least five data centers in or near the cities of  
 26 Reno, Nevada; Maiden, North Carolina; Mesa, Arizona; Prineville, Oregon; and Newark,  
 27 California. *See* <https://dgtlinfra.com/apple-data-center-locations/>. Under information and belief,  
 28

1 Apple's United States based data centers provide third-party applications to Apple's users,  
2 customers, or business partners outside the United States through Apple's App Store and Apple's  
3 operating system update processes. The third-party applications are each a component of the  
4 invention of claim 4 of the '949 Patent that is especially made or especially adapted for use in the  
5 invention, and not a staple article or commodity of commerce suitable for substantial noninfringing  
6 use. Unlike *Microsoft Corp. v. AT&T Corp.*, the third-party applications that Apple's users,  
7 customers, or business partners download from Apple's servers is what is installed in the Accused  
8 Instrumentality. See *Microsoft Corp. v. AT&T Corp.*, 550 U.S. 437, 442 (2007) ("The master disk  
9 or electronic transmission Microsoft sends from the United States is never installed on any of the  
10 foreign-made computers in question. Instead, copies made abroad are used for installation.  
11 Because Microsoft does not export from the United States the copies actually installed, it does not  
12 'suppl[y] ... from the United States' 'components' of the relevant computers, and therefore is not  
13 liable under § 271(f) as currently written.").

14  
15 GTP also contends that Apple infringes claim 4 of the '949 Patent under 35 U.S.C.  
16 §271(f)(2), by supplying or causing to be supplied in or from the United States (during at least  
17 some time periods within February 4, 2015 to May 11, 2020) the Face ID and Memojis/Animojis  
18 software components or APIs that are configured for recognizing gestures of the iOS operating  
19 system, that are especially made or especially adapted for use in the invention of claim 4 of the  
20 '949 Patent, and are not a staple article or commodity of commerce suitable for substantial  
21 noninfringing use, where iOS operating system containing the Face ID and Memojis/Animojis  
22 components or APIs that are configured for recognizing gestures are uncombined in whole or in  
23 part, knowing that the Face ID and Memojis/Animojis components or APIs that are configured for  
24 recognizing gestures of the iOS operating system are so made or adapted, and intending that the  
25 iOS operating system containing such components will be combined outside of the United States  
26 in a manner that would infringe the patent if such combination occurred within the United States.  
27 The specific software components of the iOS operating system are also components, since software  
28

1 programs may be made up of smaller software units, each of which may also be a “component”  
2 under the statute. *See Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1320 (Fed. Cir. 2009)  
3 (concluding that proper “component” for contributory infringement analysis was the date picker  
4 feature in Microsoft Outlook, not Microsoft Outlook as a whole). Apple operates data centers in  
5 the United States where the iOS operating system containing the Face ID and Memojis/Animojis  
6 components or APIs that are configured for recognizing gestures are supplied to Apple’s users,  
7 customers, or business partners outside the United States. For example, under information and  
8 belief, in the United States Apple operates at least 5 data centers in or near the cities of Reno,  
9 Nevada; Maiden, North Carolina; Mesa, Arizona; Prineville, Oregon; and Newark, California. *See*  
10 <https://dgtlinfra.com/apple-data-center-locations/>. Under information and belief, Apple’s United  
11 States based data centers provide the iOS operating system containing the Face ID and  
12 Memojis/Animojis components or APIs that are configured for recognizing gestures to Apple’s  
13 users, customers, or business partners outside the United States through Apple’s operating system  
14 update processes. The Face ID and Memojis/Animojis components or APIs that are configured  
15 for recognizing gestures are each a component of the invention of claim 4 of the ’949 Patent that  
16 is especially made or especially adapted for use in the invention, and not a staple article or  
17 commodity of commerce suitable for substantial noninfringing use. Unlike *Microsoft Corp. v.*  
18 *AT&T Corp.*, the iOS operating system (containing the Face ID and Memojis/Animojis  
19 components) that Apple’s users, customers, or business partners download from Apple’s servers  
20 is what is installed in the Accused Instrumentality. *See Microsoft Corp. v. AT&T Corp.*, 550 U.S.  
21 437, 442 (2007) (“The master disk or electronic transmission Microsoft sends from the United  
22 States is never installed on any of the foreign-made computers in question. Instead, copies made  
23 abroad are used for installation. Because Microsoft does not export from the United States the  
24 copies actually installed, it does not ‘suppl[y] ... from the United States’ ‘components’ of the  
25 relevant computers, and therefore is not liable under § 271(f) as currently written.”).

**E. Nature of Infringement [Patent L.R. 3-1(e)]**

GTP contends that each element of claim 4 of the '949 Patent is literally present. GTP also contends that, in the alternative, certain elements are satisfied under the doctrine of equivalents as set forth in Exhibit A hereto. In addition, GTP may revise these contentions to identify additional elements as present under the doctrine of equivalents if (1) Apple advances a claim construction position that, if adopted by the Court's subsequent construction, so requires; or (2) discovery reveals that the Accused Instrumentalities operate differently than GTP now contends.

**F. Priority Date [Patent L.R. 3-1(f)]**

The '949 patent is entitled to a priority date of May 11, 1999.

**G. GTP's Reliance On Its Instrumentalities [Patent L.R. 3-1(g)]**

At this time, GTP does not intend to rely on the assertion that its instrumentalities practice claim 4 of the '949 Patent.

**H. Timing of Infringement and Damages Period [Patent L.R. 3-1(h)]**

GTP contends that Apple's first infringement of claim 4 of the '949 Patent occurred upon the issuance of the '949 Patent. GTP has been damaged since the first infringement by Apple; however, pursuant to 35 U.S.C. § 286, GTP recognizes that no damages can be recovered for infringement occurring more than six years prior to the filing of the Complaint in this matter—February 4, 2021. GTP also notes that the '949 Patent expired on May 11, 2020. GTP therefore contends that its damages period is February 4, 2015 to May 11, 2020.

**I. Basis for Willful Infringement [Patent L.R. 3-1(i)]**

The basis for GTP's allegations of willful infringement is described below and can also be found in GTP's Original Complaint for Patent Infringement (D.I. 1). Dr. Pryor and his patents are well-known to Apple. Indeed, Apple has purchased patents and technologies from Dr. Timoty

Pryor in the past, including his “multi-touch” patent portfolio in 2010. Dr. Pryor later assisted Apple in asserting the multi-touch portfolio against HTC. After Dr. Pryor developed the technology embodied in the ’949 Patent, Dr. Pryor again approached Apple about acquiring or licensing rights to the ’949 Patent (as well as other related patents). GTP initiated a licensing discussion with Apple in June 2016, providing Apple with the ’949 Patent and describing the patented technology. Apple responded to GTP in writing by letter dated December 5, 2016 and negotiations continued through March 27, 2017. As a result of the correspondence described above and other negotiations, Apple was aware of the details of the Asserted Patents and was aware that Apple needed a license to practice the inventions in the ’949 Patent. On information and belief, Apple did not take any steps to change their products or to inform its engineers and design team of the ’949 Patent to avoid infringement.

**J. Document Production [Patent L.R. 3-2]**

Pursuant to Patent L.R. 3-2, GTP identifies the following categories of documents:

1. Patent L.R. 3-2(a): No applicable documents have been located.
2. Patent L.R. 3-2(b): *See* GTP\_APPLE\_00000060 – GTP\_APPLE\_00000061, GTP\_APPLE\_00000066 – GTP\_APPLE\_00000109.
3. Patent L.R. 3-2(c): *See* GTP00000001 – GTP00000916.
4. Patent L.R. 3-2(d): *See* GTP\_APPLE\_00000062 – GTP\_APPLE\_00000065, GTP\_APPLE\_00000110 – GTP\_APPLE\_00000114.
5. Patent L.R. 3-2(e): No applicable documents have been located.
6. Patent L.R. 3-2(f): *See* GTP\_00017340 – GTP\_00017341, GTP\_00019279 – GTP\_00019280, GTP\_APPLE\_00000001 – GTP\_APPLE\_00000059.
7. Patent L.R. 3-2(g): *See* GTP\_APPLE\_00000001 – GTP\_APPLE\_00000059.
8. Patent L.R. 3-2(h): *See* GTP\_APPLE\_00000001 – GTP\_APPLE\_00000059.
9. Patent L.R. 3-2(i): No applicable documents have been located.
10. Patent L.R. 3-2(j): No applicable documents have been located.

1           Discovery is ongoing and GTP reserves the right to supplement its production with  
2 responsive documents.



1 Dated: June 4, 2024

Respectfully submitted,

/s/ Fred I. Williams

Eric Carr (SBN 333128)

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**ATTORNEYS FOR GESTURE**

**TECHNOLOGY PARTNERS, LLC**

**CERTIFICATE OF SERVICE**

The undersigned hereby certifies that all counsel of record who are deemed to have consented to electronic service are being served this June 4, 2024 with a copy of the foregoing document and Exhibit A via email to the following addresses pursuant to Local Rule 5-5:

michael.jay@us.dlapiper.com;  
catherine.huang@dlapiper.com;  
sean.cunningham@us.dlapiper.com; and  
dla-gesture-apple@us.dlapiper.com

/s/ Fred I. Williams

Fred I. Williams

# EXHIBIT A

**Exhibit A – U.S. Patent 8,878,949**  
**Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR**

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
1[Pre] A portable device comprising:	<p>The preamble is not limiting. To the extent it is found to be limiting, each of the Accused Instrumentalities is a portable device.</p> <p>Each of the Accused Instrumentalities is either an iPhone or iPad; iPhones and iPads are portable devices that can be held with one hand and easily carried.</p>
1[a] a device housing including a forward facing portion, the forward facing portion of the device housing encompassing an electro-optical sensor having a field of view and including a digital camera separate from the electro-optical sensor; and	<p>Each of the Accused Instrumentalities includes a housing, including, but not limited to, the body, casing, or shell of the device, the housing including a forward facing portion, the forward facing portion of the device housing encompassing an electro-optical sensor having a field of view and including a digital camera separate from the electro-optical sensor.</p> <p>The “forward facing” portion is the device housing that includes a camera. The “a” that precedes “forward facing housing” means “one or more.” Each Accused Instrumentality may have more than one forward facing portion(s).</p> <p>The Accused Instrumentalities have a front camera and a rear camera. Thus, one “forward facing portion” would include the portion with the front camera and another “forward facing portion” would include the portion with the rear camera. The front camera and the rear camera may also be referred to as the selfie camera or main camera.</p> <p>Specifically, each of the Accused Instrumentalities include cameras including, but not limited to, the Camera(s) specified in GTP’s Disclosure of Supplemental Asserted Claims and Infringement Contentions (“SIC”), Identification of Accused Instrumentalities [Patent L.R. 3-1(b)]. One or more of the Cameras and/or Sensors, including but not limited to the ambient light sensor, operate as an electro-optical sensor separate from the digital camera.</p> <p>One or more of the Cameras and/or Sensors, including the ambient light sensor, are located near the top of the phone screen. See <a href="https://discussions.apple.com/thread/250410751">https://discussions.apple.com/thread/250410751</a> (answering user question and stating that the ambient light sensor is located next to the front facing camera on iPhone 8 Plus); <a href="https://discussions.apple.com/thread/6999115">https://discussions.apple.com/thread/6999115</a> (user concluding that the “2 dots” above the ear piece on the front of an iPhone 6 Plus are an ambient light sensor and a proximity sensor); <a href="https://www.ifixit.com/Answers/View/601383/Ambient+Light+Sensor+Filter+Replacement">https://www.ifixit.com/Answers/View/601383/Ambient+Light+Sensor+Filter+Replacement</a> (user claiming that the top of iPhone 6/6S/7/and 8 contain an ambient light sensor and a proximity sensor).</p>

**Exhibit A – U.S. Patent 8,878,949**  
**Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR**

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<div data-bbox="625 272 1570 646"> <p>A technical diagram of the top portion of an iPhone X, showing the front-facing camera assembly. Labels with leader lines point to various components: Ambient light sensor, Proximity sensor, Flood Illuminator, Infrared camera, Speaker, Microphone, 7MP camera, and Dot projector.</p> </div> <div data-bbox="625 649 1955 722"> <p><a href="https://www.quora.com/Does-a-light-always-blink-on-an-iPhone-X-near-the-front-facing-camera-I-saw-it-on-a-YouTube-video">https://www.quora.com/Does-a-light-always-blink-on-an-iPhone-X-near-the-front-facing-camera-I-saw-it-on-a-YouTube-video</a>.</p> </div> <div data-bbox="625 808 1041 846"> <p>Apple iPhone 6s device housing:</p> </div> <div data-bbox="1178 857 1398 1295"> <p>A photograph of the back of a rose gold iPhone 6s. The Apple logo is centered, and the text 'iPhone (s)' is visible at the bottom.</p> </div> <div data-bbox="625 1304 1247 1336"> <p>Apple iPhone 6s display-side camera and sensor:</p> </div>



**Exhibit A – U.S. Patent 8,878,949**  
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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	 <p>Apple iPhone 6s non-display-side camera and sensor:</p>  <p>See <a href="https://www.ifixit.com/Teardown/iPhone+6s+Teardown/48170">https://www.ifixit.com/Teardown/iPhone+6s+Teardown/48170</a></p> <p>Apple iPhone 6s Plus device housing:</p>

**Exhibit A – U.S. Patent 8,878,949**  
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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	 <p>Apple iPhone 6s Plus display-side camera and sensor:</p>  

**Exhibit A – U.S. Patent 8,878,949**  
**Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR**


U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<p>Apple iPhone 6s Plus non-display-side camera and sensor:</p>  <p>See <a href="https://www.ifixit.com/Teardown/iPhone+6s+Plus+Teardown/48171">https://www.ifixit.com/Teardown/iPhone+6s+Plus+Teardown/48171</a></p> <p>Apple iPhone SE device housing:</p>  <p>Apple iPhone SE display-side camera and sensor:</p>



**Exhibit A – U.S. Patent 8,878,949**  
**Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR**

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<div data-bbox="961 284 1606 990" data-label="Image"> </div> <p data-bbox="619 1047 1312 1084">Apple iPhone SE non-display-side camera and sensor:</p> <div data-bbox="1102 1112 1480 1282" data-label="Image"> </div> <p data-bbox="619 1299 1491 1339">See <a href="https://www.ifixit.com/Teardown/iPhone+SE+Teardown/60902">https://www.ifixit.com/Teardown/iPhone+SE+Teardown/60902</a></p> <p data-bbox="619 1339 1029 1372">Apple iPhone 7 device housing:</p>

Exhibit A – U.S. Patent 8,878,949  
*Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR*

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	 <p>Apple iPhone 7 display-side camera and sensor:</p>

**Exhibit A – U.S. Patent 8,878,949**  
**Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR**

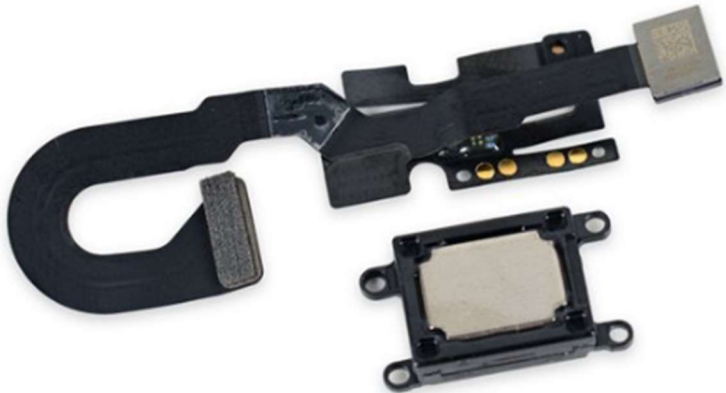




U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	 <p>Apple iPhone 7 non-display-side camera and sensor:</p>  <p>See <a href="https://www.ifixit.com/Teardown/iPhone+7+Teardown/67382">https://www.ifixit.com/Teardown/iPhone+7+Teardown/67382</a></p> <p>Apple iPhone 7 Plus device housing:</p>


Exhibit A – U.S. Patent 8,878,949  
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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	 <p data-bbox="619 768 1297 803">Apple iPhone 7 Plus display-side camera and sensor:</p> 

**Exhibit A – U.S. Patent 8,878,949**  
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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	 <p>The photograph shows the internal components of an iPhone 7 Plus non-display-side camera and sensor assembly. A red box highlights the front-facing camera lens. An orange box highlights the MEMS microphone. A yellow box highlights the stereo-enabling speaker. A green box highlights the proximity sensor and ambient light sensor. The assembly is a black flex cable with various components mounted on it.</p> <ul style="list-style-type: none"> <li>● Front-facing camera</li> <li>● MEMS Microphone</li> <li>● Stereo-enabling speaker</li> <li>● Proximity sensor and ambient light sensor</li> </ul> <p>Apple iPhone 7 Plus non-display-side camera and sensor:</p>




**Exhibit A – U.S. Patent 8,878,949**  
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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	 <p>See <a href="https://www.ifixit.com/Teardown/iPhone+7+Plus+Teardown/67384">https://www.ifixit.com/Teardown/iPhone+7+Plus+Teardown/67384</a>          Apple iPhone 8 device housing:</p>

**Exhibit A – U.S. Patent 8,878,949**  
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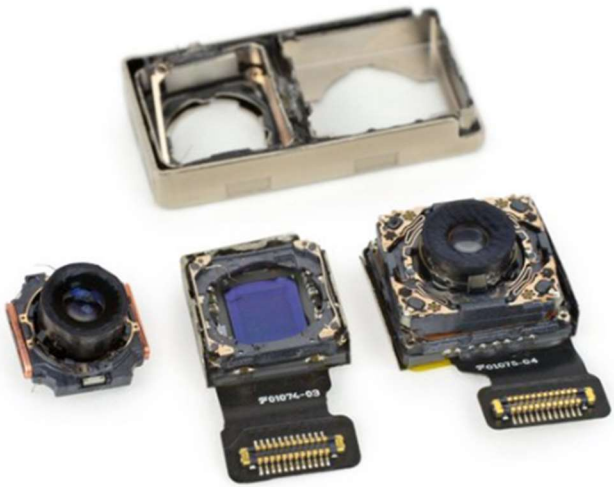

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<div data-bbox="1136 280 1409 824" data-label="Image"> </div> <p data-bbox="619 846 1234 878">Apple iPhone 8 display-side camera and sensor:</p> <div data-bbox="909 922 1654 1166" data-label="Image"> </div> <p data-bbox="619 1195 1291 1227">Apple iPhone 8 non-display-side camera and sensor:</p>

**Exhibit A – U.S. Patent 8,878,949**  
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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	 <p>See <a href="https://www.ifixit.com/Teardown/iPhone+8+Teardown/97481">https://www.ifixit.com/Teardown/iPhone+8+Teardown/97481</a>  Apple iPhone 8 Plus device housing:</p>  <p>Apple iPhone 8 Plus display-side camera and sensor:</p>  <p>Apple iPhone 8 Plus non-display-side camera and sensor:</p>





**Exhibit A – U.S. Patent 8,878,949**  
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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	 <p>See <a href="https://www.ifixit.com/Teardown/iPhone+8+Plus+Teardown/97482">https://www.ifixit.com/Teardown/iPhone+8+Plus+Teardown/97482</a></p> <p>Apple iPhone X device housing:</p>  <p>Apple iPhone X display-side camera and sensor:</p>

**Exhibit A – U.S. Patent 8,878,949**  
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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<div data-bbox="667 289 1325 808"> </div> <p data-bbox="621 902 1299 938">Apple iPhone X non-display-side camera and sensor:</p> <div data-bbox="1041 938 1495 1427"> </div> <div data-bbox="1352 264 1890 893"> <ul style="list-style-type: none"> <li>● We turn our attention to the top of the phone to find the much anticipated <a href="#">mini Kinect</a> TrueDepth camera system! This system rallies a team of sensors to bring facial recognition to the X.</li> <li>● Step one in this system: the flood illuminator embedded in the display blasts your face with infrared (IR) light.</li> <li>● Next, the front-facing camera, marked in red, confirms the presence of a face.</li> <li>● Then the IR dot projector, far right, projects a grid of dots over your face to <a href="#">create a three-dimensional map</a>.</li> <li>● Finally, the IR camera on the left reads this map, and sends the data to the phone.</li> </ul> </div>



**Exhibit A – U.S. Patent 8,878,949**  
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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<p>See <a href="https://www.ifixit.com/Teardown/iPhone+X+Teardown/98975">https://www.ifixit.com/Teardown/iPhone+X+Teardown/98975</a></p> <p>Apple iPhone XR device housing:</p>  <p>Apple iPhone XR display-side camera and sensor:</p>  <p>Apple iPhone XR non-display-side camera and sensor:</p>


**Exhibit A – U.S. Patent 8,878,949**  
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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<div data-bbox="953 298 1604 683" data-label="Image"> </div> <p data-bbox="619 706 1514 743">See <a href="https://www.ifixit.com/Teardown/iPhone+XR+Teardown/114123">https://www.ifixit.com/Teardown/iPhone+XR+Teardown/114123</a></p> <p data-bbox="619 829 1234 867">Apple iPhone XS and XS Max device housings:</p> <div data-bbox="903 896 1688 1414" data-label="Image"> </div> <p data-bbox="619 1442 1428 1479">Apple iPhone XS and XS Max display-side camera and sensor:</p>



**Exhibit A – U.S. Patent 8,878,949**  
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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<div data-bbox="869 342 1346 532">  </div> <div data-bbox="953 553 1619 1024">  </div> <div data-bbox="1367 277 1724 521"> <ul style="list-style-type: none"> <li>• What was revolutionary <a href="#">last year</a> is quickly becoming standard equipment—both the XS and the XS Max come equipped with a sensor array for Apple's <a href="#">fancy Face ID</a> technology.</li> <li>• Time to fish out the noisemakers! The Taptic engine and loudspeaker come out in an assembly, but easily separate for modular replacement.</li> <li>① The XS Max features a slightly beefier set of feedback units, but both Taptic engines follow the <a href="#">same designs of yore</a>.</li> </ul> </div> <p data-bbox="617 1045 1482 1078">Apple iPhone XS and XS Max non-display-side camera and sensor:</p>



**Exhibit A – U.S. Patent 8,878,949**  
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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	 <p>See <a href="https://www.ifixit.com/Teardown/iPhone+XS+and+XS+Max+Teardown/113021">https://www.ifixit.com/Teardown/iPhone+XS+and+XS+Max+Teardown/113021</a>          Apple iPhone 11 device housing:</p>

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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	 <p>Apple iPhone 11 display-side camera and sensor:</p>  <p>Apple iPhone 11 non-display-side camera and sensor:</p>

**Exhibit A – U.S. Patent 8,878,949**  
**Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR**

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	 <p>See <a href="https://www.ifixit.com/Teardown/iPhone+11+Teardown/126192">https://www.ifixit.com/Teardown/iPhone+11+Teardown/126192</a></p> <p>Apple iPhone 11 Pro device housing:</p>  <p>See <a href="https://www.phonearena.com/phones/Apple-iPhone-11-Pro_id11239">https://www.phonearena.com/phones/Apple-iPhone-11-Pro_id11239</a></p> <p>Apple iPhone 11 Pro display-side camera and sensor:</p>





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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<div data-bbox="1045 269 1528 711" data-label="Image"> </div> <p data-bbox="619 716 1562 748">See <a href="https://www.ifixit.com/Teardown/iPhone+11+Pro+Teardown/129687">https://www.ifixit.com/Teardown/iPhone+11+Pro+Teardown/129687</a></p> <p data-bbox="619 789 1360 821">Apple iPhone 11 Pro non-display-side camera and sensor:</p> <div data-bbox="989 841 1598 1230" data-label="Image"> </div> <p data-bbox="619 1240 1612 1273">See <a href="https://www.ifixit.com/products/iphone-11-pro-and-pro-max-rear-camera">https://www.ifixit.com/products/iphone-11-pro-and-pro-max-rear-camera</a></p> <p data-bbox="619 1278 1163 1310">Apple iPhone 11 Pro Max device housing:</p>

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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<div data-bbox="934 267 1644 636" data-label="Image"> </div> <p data-bbox="619 678 1369 711">Apple iPhone 11 Pro Max display-side camera and sensor:</p> <div data-bbox="968 711 1610 1149" data-label="Image"> </div> <p data-bbox="619 1190 1425 1222">Apple iPhone 11 Pro Max non-display-side camera and sensor:</p>



**Exhibit A – U.S. Patent 8,878,949**  
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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	 <p>See <a href="https://www.techinsights.com/blog/apple-iphone-11-pro-max-teardown">https://www.techinsights.com/blog/apple-iphone-11-pro-max-teardown</a></p> <p>Apple iPhone SE (2<sup>nd</sup> Generation) device housing:</p>  <p>Apple iPhone SE (2<sup>nd</sup> Generation) display-side camera and sensor:</p>

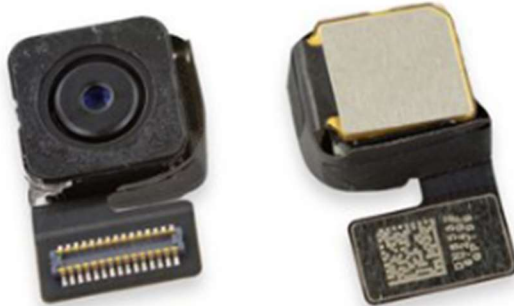

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***Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR***

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	 <p>Apple iPhone SE (2<sup>nd</sup> Generation) non-display-side camera and sensor:</p>  <p>See <a href="https://www.ifixit.com/Teardown/iPhone+SE+2020+Teardown/133066">https://www.ifixit.com/Teardown/iPhone+SE+2020+Teardown/133066</a></p> <p>See <a href="https://www.ifixit.com/Teardown/iPhone+12+and+12+Pro+Teardown/137669">https://www.ifixit.com/Teardown/iPhone+12+and+12+Pro+Teardown/137669</a></p> <p>Apple iPad mini 4 device housing:</p>

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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	 <p data-bbox="621 695 1268 727">Apple iPad mini 4 display-side camera and sensor:</p>  <p data-bbox="621 1320 1327 1352">Apple iPad mini 4 non-display-side camera and sensor:</p>



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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	 <p>See <a href="https://www.ifixit.com/Teardown/iPad+Mini+4+Teardown/48891">https://www.ifixit.com/Teardown/iPad+Mini+4+Teardown/48891</a>          Apple iPad Pro 12.9-inch (2015) device housing:</p>  <p>Apple iPad Pro 12.9-inch (2015) display-side camera and sensor:</p>

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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	 <p>Apple iPad Pro 12.9-inch (2015) non-display-side camera and sensor:</p>  <p>See <a href="https://www.ifixit.com/Teardown/iPad+Pro+12.9-Inch+Teardown/52599">https://www.ifixit.com/Teardown/iPad+Pro+12.9-Inch+Teardown/52599</a>  Apple iPad Pro 12.9-inch (2<sup>nd</sup> Generation) device housing:</p>  <p>See <a href="https://www.phonearena.com/phones/Apple-iPad-Pro-12.9-inch-2018_id11033">https://www.phonearena.com/phones/Apple-iPad-Pro-12.9-inch-2018_id11033</a></p>

**Exhibit A – U.S. Patent 8,878,949**  
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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<p>Apple iPad Pro 12.9-inch (2<sup>nd</sup> Generation) display-side camera and sensor:</p>  <p>Apple iPad Pro 12.9-inch (2<sup>nd</sup> Generation) non-display-side camera and sensor:</p>  <p>See <a href="https://arstechnica.com/gadgets/2020/03/ipad-pro-teardown-basically-finds-2018s-ipad-with-a-lidar-sensor/">https://arstechnica.com/gadgets/2020/03/ipad-pro-teardown-basically-finds-2018s-ipad-with-a-lidar-sensor/</a></p> <p>Apple iPad Pro 12.9-inch (3<sup>rd</sup> Generation) device housing:</p>



**Exhibit A – U.S. Patent 8,878,949**  
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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<div data-bbox="1102 269 1461 714" data-label="Image"> </div> <p data-bbox="619 716 1570 753">Apple iPad Pro 12.9-inch (3<sup>rd</sup> Generation) display-side camera and sensor:</p> <div data-bbox="995 751 1575 1003" data-label="Image"> </div> <p data-bbox="619 1005 1629 1042">Apple iPad Pro 12.9-inch (3<sup>rd</sup> Generation) non-display-side camera and sensor:</p> <div data-bbox="1155 1040 1413 1336" data-label="Image"> </div> <p data-bbox="619 1338 1753 1375">See <a href="https://www.ifixit.com/Teardown/iPad+Pro+12.9-Inch+3rd+Gen+Teardown/127725">https://www.ifixit.com/Teardown/iPad+Pro+12.9-Inch+3rd+Gen+Teardown/127725</a></p>




**Exhibit A – U.S. Patent 8,878,949**  
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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use														
	<p>Apple iPad Pro 12.9-inch (4<sup>th</sup> Generation) device housing:</p>  <p>See <a href="https://www.phonearena.com/phones/Apple-iPad-Pro-12.9-inch-2020_id11312">https://www.phonearena.com/phones/Apple-iPad-Pro-12.9-inch-2020_id11312</a></p> <p>Apple iPad Pro 12.9-inch (4<sup>th</sup> Generation) display-side camera and sensor:</p> <table border="1"> <tr> <td>Front:</td><td>7 MP (EIS, HDR)</td></tr> <tr> <td>Video capture:</td><td>1920×1080 (Full HD)</td></tr> </table> <p>See <a href="https://www.phonearena.com/phones/Apple-iPad-Pro-12.9-inch-2020_id11312">https://www.phonearena.com/phones/Apple-iPad-Pro-12.9-inch-2020_id11312</a></p> <p>Apple iPad Pro 12.9-inch (4<sup>th</sup> Generation) non-display-side camera and sensor:</p> <table border="1"> <tr> <td>Rear:</td><td>Dual camera</td></tr> <tr> <td>Main camera:</td><td>12 MP (PDAF)</td></tr> <tr> <td>Specifications:</td><td>Aperture size: F1.8</td></tr> <tr> <td>Second camera:</td><td>10 MP (Ultra-wide)</td></tr> <tr> <td>Specifications:</td><td>Aperture size: F2.4</td></tr> </table> <p>See <a href="https://www.phonearena.com/phones/Apple-iPad-Pro-12.9-inch-2020_id11312">https://www.phonearena.com/phones/Apple-iPad-Pro-12.9-inch-2020_id11312</a></p> <p>Apple iPad Pro 9.7-inch (2016) device housing:</p>	Front:	7 MP (EIS, HDR)	Video capture:	1920×1080 (Full HD)	Rear:	Dual camera	Main camera:	12 MP (PDAF)	Specifications:	Aperture size: F1.8	Second camera:	10 MP (Ultra-wide)	Specifications:	Aperture size: F2.4
Front:	7 MP (EIS, HDR)														
Video capture:	1920×1080 (Full HD)														
Rear:	Dual camera														
Main camera:	12 MP (PDAF)														
Specifications:	Aperture size: F1.8														
Second camera:	10 MP (Ultra-wide)														
Specifications:	Aperture size: F2.4														



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**Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR**

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<div data-bbox="1041 297 1514 716" data-label="Image"> </div> <p data-bbox="619 732 1436 768">Apple iPad Pro 9.7-inch (2016) display-side camera and sensor:</p> <div data-bbox="1102 784 1457 1117" data-label="Image"> </div> <p data-bbox="619 1120 1495 1156">Apple iPad Pro 9.7-inch (2016) non-display-side camera and sensor:</p> <div data-bbox="1050 1182 1493 1365" data-label="Image"> </div> <p data-bbox="619 1385 1589 1421">See <a href="https://www.ifixit.com/Teardown/iPad+Pro+9.7-Inch+Teardown/60939">https://www.ifixit.com/Teardown/iPad+Pro+9.7-Inch+Teardown/60939</a></p>



**Exhibit A – U.S. Patent 8,878,949**  
**Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR**

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<p>Apple iPad Pro 9.7-inch (5<sup>th</sup> Generation) device housing:</p>  <p>See <a href="https://www.gsmarena.com/apple_ipad_9_7_(2017)-8620.php">https://www.gsmarena.com/apple_ipad_9_7_(2017)-8620.php</a></p> <p>Apple iPad Pro 9.7-inch (5<sup>th</sup> Generation) display-side camera and sensor:</p>  <p>See <a href="https://www.idownloadblog.com/2017/03/30/teardown-analysis-finds-apples-new-9-7-ipad-is-a-repackaged-ipad-air-with-a-few-differences/">https://www.idownloadblog.com/2017/03/30/teardown-analysis-finds-apples-new-9-7-ipad-is-a-repackaged-ipad-air-with-a-few-differences/</a></p> <p>Apple iPad Pro 9.7-inch (5<sup>th</sup> Generation) non-display-side camera and sensor:</p> 

**Exhibit A – U.S. Patent 8,878,949**  
**Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR**

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<p>See <a href="https://www.idownloadblog.com/2017/03/30/teardown-analysis-finds-apples-new-9-7-ipad-is-a-repackaged-ipad-air-with-a-few-differences/">https://www.idownloadblog.com/2017/03/30/teardown-analysis-finds-apples-new-9-7-ipad-is-a-repackaged-ipad-air-with-a-few-differences/</a></p> <p>Apple iPad Pro 10.5-inch (2017) device housing:</p>  <p>Apple iPad Pro 10.5-inch (2017) display-side camera and sensor:</p>  <p>Apple iPad Pro 10.5-inch (2017) non-display-side camera and sensor:</p>



**Exhibit A – U.S. Patent 8,878,949**  
**Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR**

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	 <p data-bbox="619 613 1606 683">See <a href="https://www.ifixit.com/Teardown/iPad+Pro+10.5-Inch+Teardown/92534">https://www.ifixit.com/Teardown/iPad+Pro+10.5-Inch+Teardown/92534</a>  Apple iPad 9.7-inch (6<sup>th</sup> Generation) device housing:</p>  <p data-bbox="619 1273 1501 1307">Apple iPad 9.7-inch (6<sup>th</sup> Generation) display-side camera and sensor:</p>

**Exhibit A – U.S. Patent 8,878,949**  
**Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR**

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<div data-bbox="1100 337 1478 519" data-label="Image"> </div> <p data-bbox="961 527 1648 613">+ 1.2-megapixel 720p front-facing FaceTime HD camera</p> <p data-bbox="621 625 1560 662">Apple iPad 9.7-inch (6<sup>th</sup> Generation) non-display-side camera and sensor:</p> <div data-bbox="1024 675 1602 876" data-label="Image"> </div> <p data-bbox="909 894 1661 932">● 8-megapixel 1080p rear-facing iSight camera</p> <p data-bbox="621 943 1453 976">See <a href="https://www.ifixit.com/Teardown/iPad+6+Teardown/105416">https://www.ifixit.com/Teardown/iPad+6+Teardown/105416</a></p> <p data-bbox="621 980 1339 1013">Apple iPad Pro 11-inch (1<sup>st</sup> Generation) device housing:</p> <div data-bbox="995 1032 1587 1458" data-label="Image"> </div>

**Exhibit A – U.S. Patent 8,878,949**  
**Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR**

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<p>Apple iPad Pro 11-inch (1<sup>st</sup> Generation) display-side camera and sensor:</p>  <p>Apple iPad Pro 11-inch (1<sup>st</sup> Generation) non-display-side camera and sensor:</p> 



**Exhibit A – U.S. Patent 8,878,949**  
**Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR**

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<div data-bbox="1192 282 1409 548" data-label="Image"> </div> <p data-bbox="619 570 1598 639">See <a href="https://www.ifixit.com/Teardown/iPad+Pro+11-Inch+Teardown/115457">https://www.ifixit.com/Teardown/iPad+Pro+11-Inch+Teardown/115457</a>  Apple iPad Pro 11-inch (2<sup>nd</sup> Generation) device housing:</p> <div data-bbox="1100 646 1476 1065" data-label="Image"> </div> <p data-bbox="619 1073 1661 1182">See <a href="https://www.phonearena.com/phones/Apple-iPad-Pro-11-inch-2020_id11380">https://www.phonearena.com/phones/Apple-iPad-Pro-11-inch-2020_id11380</a>  Apple iPad Pro 11-inch (2<sup>nd</sup> Generation) display-side camera and sensor:</p>




**Exhibit A – U.S. Patent 8,878,949**  
***Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR***

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	 <p>See <a href="https://www.ifixit.com/Guide/iPad+Pro+11-Inch+2nd+Gen+Front+Camera+Assembly+Replacement/153825">https://www.ifixit.com/Guide/iPad+Pro+11-Inch+2nd+Gen+Front+Camera+Assembly+Replacement/153825</a></p> <p>Apple iPad Pro 11-inch (2<sup>nd</sup> Generation) non-display-side camera and sensor:</p>  <p>See <a href="https://www.phonearena.com/phones/Apple-iPad-Pro-11-inch-2020_id11380">https://www.phonearena.com/phones/Apple-iPad-Pro-11-inch-2020_id11380</a></p> <p>Apple iPad Air (3<sup>rd</sup> Generation) device housing:</p> 

**Exhibit A – U.S. Patent 8,878,949**  
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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<p>Apple iPad Air (3<sup>rd</sup> Generation) display-side camera and sensor:</p>  <p>Apple iPad Air (3<sup>rd</sup> Generation) non-display-side camera and sensor:</p>  <p>See <a href="https://www.ifixit.com/Teardown/iPad+Air+3+Teardown/121759">https://www.ifixit.com/Teardown/iPad+Air+3+Teardown/121759</a></p> <p>Apple iPad mini (5<sup>th</sup> Generation) device housing:</p>  <p>Apple iPad mini (5<sup>th</sup> Generation) display-side camera and sensor:</p>

**Exhibit A – U.S. Patent 8,878,949**  
**Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR**

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<div data-bbox="1129 297 1451 506"></div> <p data-bbox="621 509 1514 545">Apple iPad mini (5<sup>th</sup> Generation) non-display-side camera and sensor:</p> <div data-bbox="1098 597 1440 833"></div> <p data-bbox="621 836 1533 872">See <a href="https://www.ifixit.com/Teardown/iPad+Mini+5+Teardown/121589">https://www.ifixit.com/Teardown/iPad+Mini+5+Teardown/121589</a></p> <p data-bbox="621 875 1184 911">Apple iPad (7<sup>th</sup> Generation) device housing:</p> <div data-bbox="1003 922 1587 1323"></div>

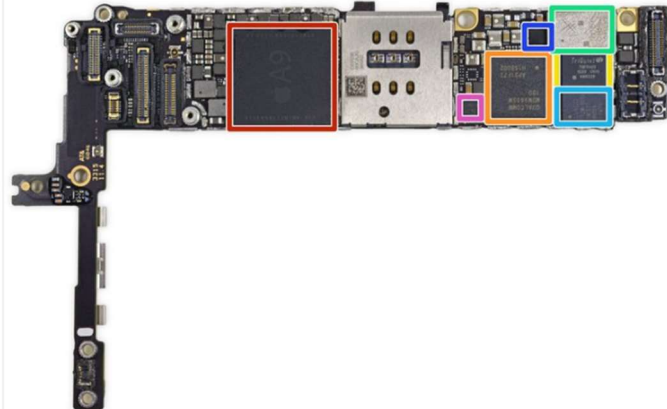
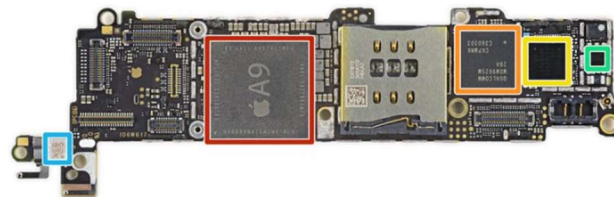
**Exhibit A – U.S. Patent 8,878,949**  
**Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR**

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<div data-bbox="982 272 1583 691" data-label="Image"> </div> <p data-bbox="619 699 1388 735">Apple iPad (7<sup>th</sup> Generation) display-side camera and sensor:</p> <div data-bbox="1085 734 1493 1000" data-label="Image"> </div> <p data-bbox="619 1003 1446 1039">Apple iPad (7<sup>th</sup> Generation) non-display-side camera and sensor:</p> <div data-bbox="1085 1037 1451 1390" data-label="Image"> </div> <p data-bbox="619 1398 1451 1432">See <a href="https://www.ifixit.com/Teardown/iPad+7+Teardown/126291">https://www.ifixit.com/Teardown/iPad+7+Teardown/126291</a></p>

**Exhibit A – U.S. Patent 8,878,949**  
***Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR***

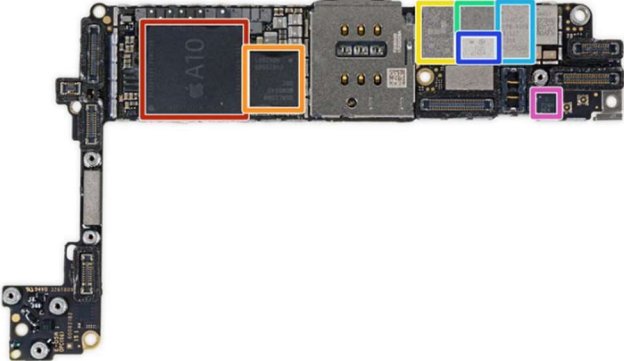
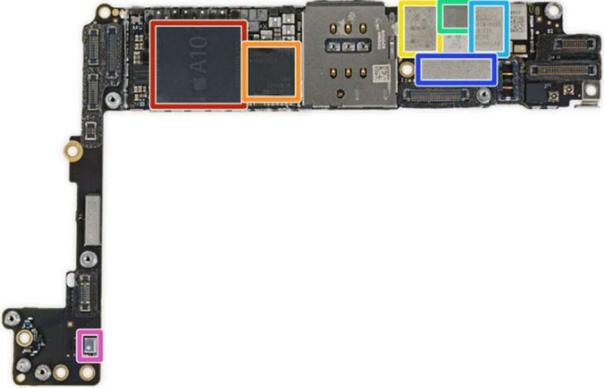
U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
<p>1[b] a processing unit within the device housing and operatively coupled to an output of the electro-optical sensor, wherein the processing unit is adapted to:</p>	<p>Each of the Accused Instrumentalities includes a processing unit within the device housing and operatively coupled to an output of the electro-optical sensor.</p> <p>Specifically, each of the Accused Instrumentalities includes a computer including, but not limited to, its Processors or Systems-On-Chips and associated hardware and software. <i>See</i> SIC, Identification of Accused Instrumentalities. The Processors or Systems-On-Chips provided in each of the Accused Instrumentalities are within the device housing and operatively coupled to an output of the electro-optical sensor.</p> <p>Apple iPhone 6s processor:</p> <div data-bbox="688 889 1325 1263"> </div> <ul style="list-style-type: none"> <li>● And now, for the moment we've all been waiting for... It's time to reveal some ICs on the front of the logic board:</li> <li>● Apple A9 <a href="#">APL0898</a> SoC + Samsung 2 GB LPDDR4 RAM (as denoted by the markings K3RG1G10BM-BGCH)</li> <li>● Qualcomm <a href="#">MDM9635M</a> LTE Cat. 6 Modem (vs. the <a href="#">MDM9625M</a> found in the iPhone 6)</li> <li>● InvenSense <a href="#">MP67B</a> 6-axis Gyroscope and Accelerometer Combo (also found in iPhone 6)</li> <li>● Bosch Sensortec 3P7 LA 3-axis Accelerometer (likely <a href="#">BMA280</a>)</li> </ul> <p>“Apple A9 <a href="#">APL0898</a> SoC + Samsung 2 GB LPDDR4 RAM (as denoted by the markings K3RG1G10BM-BGCH)”</p>

**Exhibit A – U.S. Patent 8,878,949**  
***Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR***

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<p>See <a href="https://www.ifixit.com/Teardown/iPhone+6s+Teardown/48170">https://www.ifixit.com/Teardown/iPhone+6s+Teardown/48170</a></p> <p>Apple iPhone 6s Plus processor:</p>  <ul style="list-style-type: none"> <li>● Apple A9 <a href="#">APL1022</a> SoC + SK Hynix LPDDR4 RAM as denoted by the markings H9HKNNNBTUMUMR-NLH (we presume it is 2 GB LPDDR4 RAM, the same as in the iPhone 6s)</li> <li>● Qualcomm <a href="#">MDM9635M</a> LTE Cat. 6 Modem (vs. the <a href="#">MDM9625M</a> found in the iPhone 6)</li> <li>● TriQuint <a href="#">TQF6405</a> Power Amplifier Module</li> <li>● Skyworks <a href="#">SKY77812</a> Power Amplifier Module</li> <li>● Avago <a href="#">AFEM-8030</a> Power Amplifier Module</li> <li>● Qualcomm <a href="#">QFE1100</a> Envelope Tracking IC</li> </ul> <p>“Apple A9 <a href="#">APL1022</a> SoC + SK Hynix LPDDR4 RAM as denoted by the markings H9HKNNNBTUMUMR-NLH (we presume it is 2 GB LPDDR4 RAM, the same as in the iPhone 6s)”</p> <p>See <a href="https://www.ifixit.com/Teardown/iPhone+6s+Plus+Teardown/48171">https://www.ifixit.com/Teardown/iPhone+6s+Plus+Teardown/48171</a></p> <p>Apple iPhone SE processor:</p>  <ul style="list-style-type: none"> <li>● We pop the pesky rear connector off the logic board, and are free to scan the silicon fields of glory!</li> <li>● Apple A9 <a href="#">APL1022</a> SoC + SK Hynix 2 GB LPDDR4 RAM as denoted by the markings H9KNNNBTUMUMR-NLH</li> <li>● Qualcomm <a href="#">MDM9625M</a> LTE Modem (as seen in iPhone 6/6 Plus)</li> <li>● Qualcomm <a href="#">WTR1625L</a> RF Transceiver (as seen in iPhone 6/6 Plus)</li> <li>● Qualcomm <a href="#">QFE1100</a> Envelope Tracking IC (as seen in 6s/6s Plus, and 6/6 Plus)</li> </ul> <p>See <a href="https://www.ifixit.com/Teardown/iPhone+SE+Teardown/60902">https://www.ifixit.com/Teardown/iPhone+SE+Teardown/60902</a></p>



**Exhibit A – U.S. Patent 8,878,949**  
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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<p>Apple iPhone 7 processor:</p>  <p>See <a href="https://www.ifixit.com/Teardown/iPhone+7+Teardown/67382">https://www.ifixit.com/Teardown/iPhone+7+Teardown/67382</a></p> <p>Apple iPhone 7 Plus processor:</p>  <p>See <a href="https://www.ifixit.com/Teardown/iPhone+7+Plus+Teardown/67384">https://www.ifixit.com/Teardown/iPhone+7+Plus+Teardown/67384</a></p> <p>Apple iPhone 8 processor:</p>

- Apple A10 Fusion APL1W24 SoC + Samsung 2 GB LPDDR4 RAM (as denoted by the markings K3RG1G10CM-YGCH)
- Qualcomm MDM9645M LTE Cat. 12 Modem
- Skyworks SKY78100-20 Power Amplifier Module
- Avago AFEM-8065 Power Amplifier Module
- Avago AFEM-8055 Power Amplifier Module
- Murata 025 Antenna Switch Module (likely)

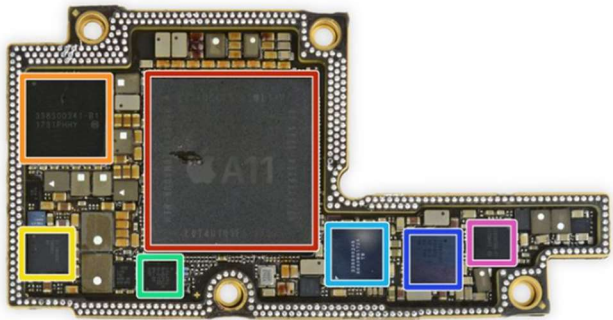
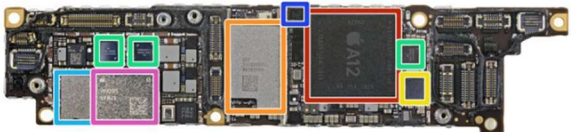
- Apple A10 Fusion APL1W24 SoC + Samsung 3 GB LPDDR4 RAM (as denoted by the markings K3RG4G40MM-YGCH)
- Qualcomm MDM9645M LTE Cat. 12 Modem
- Skyworks SKY78100-20 Power Amplifier Module
- Avago AFEM-8065 Power Amplifier Module
- Avago AFEM-8055 Power Amplifier Module
- Universal Scientific Industrial O1 X4 (likely the M2800 "Trinity" SIP)



**Exhibit A – U.S. Patent 8,878,949**  
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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<div data-bbox="743 269 1373 680"> </div> <ul style="list-style-type: none"> <li>● Drumroll please—it's chip time! Special thanks to the folks at <a href="#">TechInsights</a> for helping scope out this silicon:</li> <li>● Apple <a href="#">339S00434</a> A11 Bionic SoC layered over SK Hynix H9HKNNNBRMMUUR 2 GB LPDDR4x RAM</li> <li>● Qualcomm <a href="#">MDM9655</a> Snapdragon X16 LTE modem</li> <li>● Skyworks SkyOne SKY78140</li> <li>● Avago 8072JD130</li> <li>● P215 730N71T, likely an envelope tracking IC</li> </ul> <p>See <a href="https://www.ifixit.com/Teardown/iPhone+8+Teardown/97481">https://www.ifixit.com/Teardown/iPhone+8+Teardown/97481</a></p> <p>Apple iPhone 8 Plus processor:</p> <div data-bbox="735 805 1365 1216"> </div> <ul style="list-style-type: none"> <li>● Let's take a look at what the iPhone 8 Plus has under the hood:</li> <li>● Apple <a href="#">339S00439</a> A11 Bionic SoC layered over Samsung 3 GB LPDDR4 RAM</li> <li>● Qualcomm <a href="#">MDM9655</a> Snapdragon X16 LTE modem</li> <li>● Skyworks SkyOne SKY78140</li> <li>● Avago 8072JD112</li> <li>● P215 730N71T - likely an envelope tracking IC</li> </ul> <p>See <a href="https://www.ifixit.com/Teardown/iPhone+8+Plus+Teardown/97482">https://www.ifixit.com/Teardown/iPhone+8+Plus+Teardown/97482</a></p> <p>Apple iPhone X processor:</p>

**Exhibit A – U.S. Patent 8,878,949**  
***Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR***

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<div data-bbox="716 285 1325 602">  </div> <ul style="list-style-type: none"> <li>● On the first half: <ul style="list-style-type: none"> <li>● Apple <a href="#">APL1W72</a> A11 Bionic SoC layered over SK hynix H9HKNNNDBMAUUR 3 GB LPDDR4X RAM</li> <li>● Apple 338S00341-B1 power management IC</li> <li>● Texas Instruments SN2501 battery charger</li> <li>● NXP Semiconductor CBTL1612A1—Likely an iteration of the 1610 tristar IC</li> <li>● Apple 338S00248 audio codec</li> <li>● STMicroelectronics STB600B0 power management</li> </ul> </li> </ul> <p>See <a href="https://www.ifixit.com/Teardown/iPhone+X+Teardown/98975">https://www.ifixit.com/Teardown/iPhone+X+Teardown/98975</a>  Apple iPhone XR processor:</p> <div data-bbox="764 883 1331 1013">  </div> <ul style="list-style-type: none"> <li>● Apple <a href="#">APL1W81</a> A12 Bionic SoC, layered over Micron MT53D384M64D4SB-046 XT:E 3 GB LPDDR4x SDRAM</li> <li>● Apple/USI 339S00580 (likely a WiFi/Bluetooth module, similar to <a href="#">what's found in the XS</a>)</li> <li>● NXP Semiconductor SN100V NFC controller</li> <li>● 3x Apple/Cirrus Logic 338S00411 audio amplifiers</li> <li>● Skyworks 203-15 G67407 1838 (likely a power amplification module)</li> </ul> <p>See <a href="https://www.ifixit.com/Teardown/iPhone+XR+Teardown/114123">https://www.ifixit.com/Teardown/iPhone+XR+Teardown/114123</a>  Apple iPhone XS processor:</p>

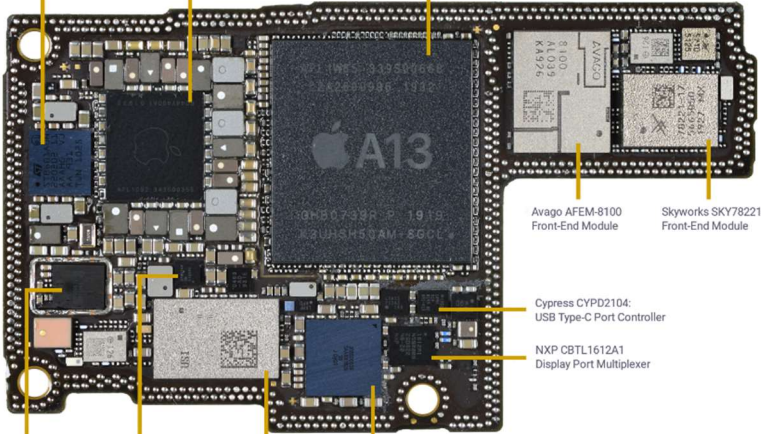
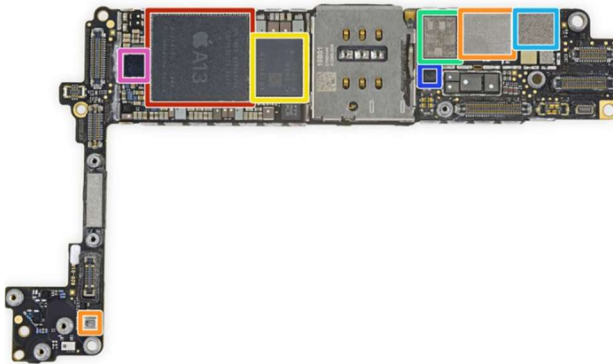
**Exhibit A – U.S. Patent 8,878,949**  
***Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR***

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<div data-bbox="774 289 1360 524"> </div> <p align="center"><b>Apple iPhone XS Max processor:</b></p> <div data-bbox="711 670 1360 857"> </div> <p>See <a href="https://www.ifixit.com/Teardown/iPhone+XS+and+XS+Max+Teardown/113021">https://www.ifixit.com/Teardown/iPhone+XS+and+XS+Max+Teardown/113021</a></p> <p><b>Apple iPhone 11 processor:</b></p> <ul style="list-style-type: none"> <li>● Computer, zoom in and enhance the under-side of the top board:</li> <li>● Apple <a href="#">APL1W81</a> A12 Bionic SoC layered over Micron MT53D512M64D4SB-046 4 GB LPDDR4X SDRAM</li> <li>● STMicroelectronics STB601A0 power management IC (possibly for Face ID)</li> <li>● 3x Apple/Cirrus Logic 338S00411 audio amplifiers, two for stereo and one for haptics</li> <li>● Digging a little deeper, we find the RF board (XS on left, XS Max on right):</li> <li>● Apple/USI 339S00551 (XS) and 338S00540 (XS Max) WiFi/Bluetooth SoC</li> <li>● Intel PMB9955 (likely XMM7560) baseband processor/modems</li> <li>④ Sorry, Qualcomm fans.</li> <li>● ST Microelectronics <a href="#">ST33G1M2</a> 32 bit MCU with ARM <a href="#">SecurCore SC300</a></li> </ul>

**Exhibit A – U.S. Patent 8,878,949**  
***Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR***

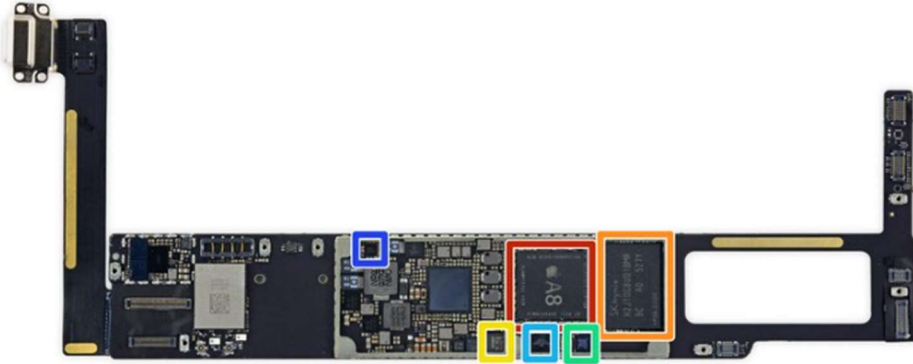
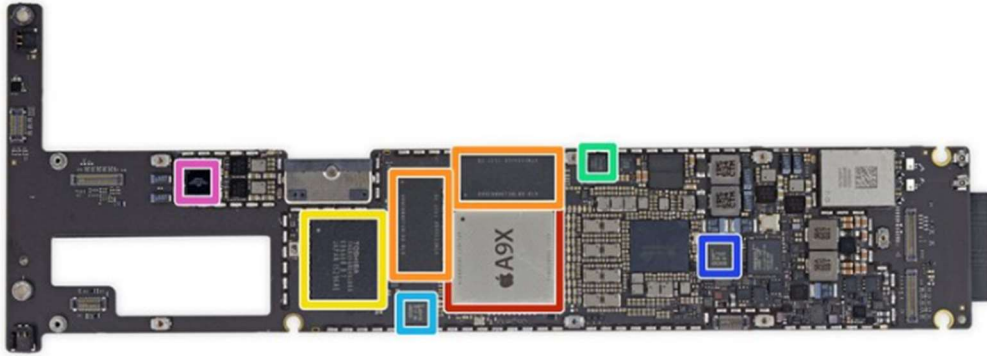
U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use						
	<div data-bbox="640 277 1199 626"> </div> <div data-bbox="1352 302 1856 667"> <ul style="list-style-type: none"> <li>● Out with the logic board comes some savory silicon:</li> <li>● APL1W85: Apple's A13 Bionic system-on-chip, layered over SK hynix LPDDR4X RAM. SK hynix's documentation doesn't contain a decoder for this model number, but it's seemingly 4GB of the stuff.</li> <li>● Apple APL1092 343S00354 PMIC</li> <li>● Intel 9960 P10PSM modem and P10 406 transceiver.</li> </ul> </div> <p data-bbox="621 683 1499 712">See <a href="https://www.ifixit.com/Teardown/iPhone+11+Teardown/126192">https://www.ifixit.com/Teardown/iPhone+11+Teardown/126192</a></p> <p data-bbox="621 721 1024 750">Apple iPhone 11 Pro processor:</p> <table border="1" data-bbox="768 751 1818 964"> <tr> <td><b>System chip:</b></td><td>Apple A13 Bionic APL1W85 (7 nm)</td></tr> <tr> <td><b>Processor:</b></td><td>Hexa-core, 2650 MHz, Lightning and Thunder, 64-bit</td></tr> <tr> <td><b>GPU:</b></td><td>Apple-designed 4 core</td></tr> </table> <p data-bbox="621 972 1549 1002">See <a href="https://www.phonearena.com/phones/Apple-iPhone-11-Pro_id11239">https://www.phonearena.com/phones/Apple-iPhone-11-Pro_id11239</a></p> <p data-bbox="621 1092 1089 1122">Apple iPhone 11 Pro Max processor:</p>	<b>System chip:</b>	Apple A13 Bionic APL1W85 (7 nm)	<b>Processor:</b>	Hexa-core, 2650 MHz, Lightning and Thunder, 64-bit	<b>GPU:</b>	Apple-designed 4 core
<b>System chip:</b>	Apple A13 Bionic APL1W85 (7 nm)						
<b>Processor:</b>	Hexa-core, 2650 MHz, Lightning and Thunder, 64-bit						
<b>GPU:</b>	Apple-designed 4 core						

**Exhibit A – U.S. Patent 8,878,949**  
***Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR***

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<div data-bbox="898 277 1686 837">  <p>STMicroelectronics STB601 PMIC</p> <p>Apple 343S00355/ APL1092 PMIC</p> <p>Apple A13 APL1W85 PoP (A13 AP+Samsung K3UH5H50AM-SGCL 4GB LPDDR4X SDRAM)</p> <p>Avago AFEM-8100 Front-End Module</p> <p>Skyworks SKY78221-17 Front-End Module</p> <p>Cypress CYPD2104: USB Type-C Port Controller</p> <p>NXP C8TL1612A1 Display Port Multiplexer</p> <p>Apple 338S00510 PMIC</p> <p>Texas Instruments TPS61280 Battery DC/DC Converter</p> <p>USI Module (likely with Apple U1 inside)</p> <p>Apple 338S00509 Audio Codec (likely)</p> </div> <p>See <a href="https://www.techinsights.com/blog/apple-iphone-11-pro-max-teardown">https://www.techinsights.com/blog/apple-iphone-11-pro-max-teardown</a></p> <p>Apple iPhone SE (2<sup>nd</sup> Generation) processor:</p> <div data-bbox="737 980 1346 1341">  </div> <div data-bbox="1388 967 1822 1333"> <p>Time for a little Silicon Exploration:</p> <ul style="list-style-type: none"> <li>Apple APL1W85 A13 Bionic SoC layered over Samsung K3UH4H40BM-SGCL (presumably 3 GB LPDDR4X)</li> <li>Avago 8100 mid/high band PAMiD</li> <li>Intel PMB9960 P10PSV modem</li> <li>Skyworks 78223-17 power amplifier module</li> <li>Skyworks 78221-17 low-band PAMiD</li> </ul> </div> <p>See <a href="https://www.ifixit.com/Teardown/iPhone+SE+2020+Teardown/133066">https://www.ifixit.com/Teardown/iPhone+SE+2020+Teardown/133066</a></p>



**Exhibit A – U.S. Patent 8,878,949**  
***Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR***

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<p>Apple iPad mini 4 processor:</p>  <ul style="list-style-type: none"> <li>● Apple A8 APL1011 SoC, with SK Hynix H9CKNNN8KTBUSR 2 GB LPDDR3 SDRAM</li> </ul> <p>See <a href="https://www.ifixit.com/Teardown/iPad+Mini+4+Teardown/48891">https://www.ifixit.com/Teardown/iPad+Mini+4+Teardown/48891</a></p> <p>Apple iPad Pro 12.9-inch (2015) processor:</p>  <ul style="list-style-type: none"> <li>● Apple APL1021 A9X 64-bit Processor</li> </ul> <p>See <a href="https://www.ifixit.com/Teardown/iPad+Pro+12.9-Inch+Teardown/52599">https://www.ifixit.com/Teardown/iPad+Pro+12.9-Inch+Teardown/52599</a></p> <p>Apple iPad Pro 12.9-inch (2<sup>nd</sup> Generation) processor:</p>

**Exhibit A – U.S. Patent 8,878,949**  
***Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR***

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use												
	<table border="0"> <tr> <td><b>System chip:</b></td><td>Apple A12X Bionic APL1083 (7 nm)</td></tr> <tr> <td><b>Processor:</b></td><td>Octa-core, 2490 MHz, Vortex and Tempest, 64-bit</td></tr> <tr> <td><b>GPU:</b></td><td>Apple 7-core GPU</td></tr> </table> <p>See <a href="https://www.phonearena.com/phones/Apple-iPad-Pro-12.9-inch-2018_id11033">https://www.phonearena.com/phones/Apple-iPad-Pro-12.9-inch-2018_id11033</a></p> <p>Apple iPad Pro 12.9-inch (3<sup>rd</sup> Generation) processor:</p> <div data-bbox="850 662 1717 909" data-label="Image"> </div> <p>See <a href="https://www.ifixit.com/Teardown/iPad+Pro+12.9-Inch+3rd+Gen+Teardown/127725">https://www.ifixit.com/Teardown/iPad+Pro+12.9-Inch+3rd+Gen+Teardown/127725</a></p> <p>Apple iPad Pro 12.9-inch (4<sup>th</sup> Generation) processor:</p> <table border="0"> <tr> <td><b>System chip:</b></td><td>Apple A12Z Bionic APL1083 (7 nm)</td></tr> <tr> <td><b>Processor:</b></td><td>Octa-core, 2490 MHz, Vortex and Tempest, 64-bit</td></tr> <tr> <td><b>GPU:</b></td><td>Apple 8-core GPU</td></tr> </table> <p>See <a href="https://www.phonearena.com/phones/Apple-iPad-Pro-12.9-inch-2020_id11312">https://www.phonearena.com/phones/Apple-iPad-Pro-12.9-inch-2020_id11312</a></p> <p>Apple iPad Pro 9.7-inch (2016) processor:</p>	<b>System chip:</b>	Apple A12X Bionic APL1083 (7 nm)	<b>Processor:</b>	Octa-core, 2490 MHz, Vortex and Tempest, 64-bit	<b>GPU:</b>	Apple 7-core GPU	<b>System chip:</b>	Apple A12Z Bionic APL1083 (7 nm)	<b>Processor:</b>	Octa-core, 2490 MHz, Vortex and Tempest, 64-bit	<b>GPU:</b>	Apple 8-core GPU
<b>System chip:</b>	Apple A12X Bionic APL1083 (7 nm)												
<b>Processor:</b>	Octa-core, 2490 MHz, Vortex and Tempest, 64-bit												
<b>GPU:</b>	Apple 7-core GPU												
<b>System chip:</b>	Apple A12Z Bionic APL1083 (7 nm)												
<b>Processor:</b>	Octa-core, 2490 MHz, Vortex and Tempest, 64-bit												
<b>GPU:</b>	Apple 8-core GPU												

**Exhibit A – U.S. Patent 8,878,949**  
***Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR***

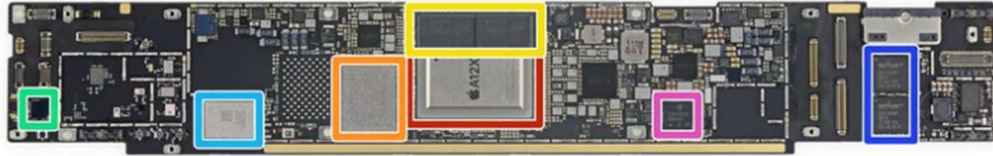
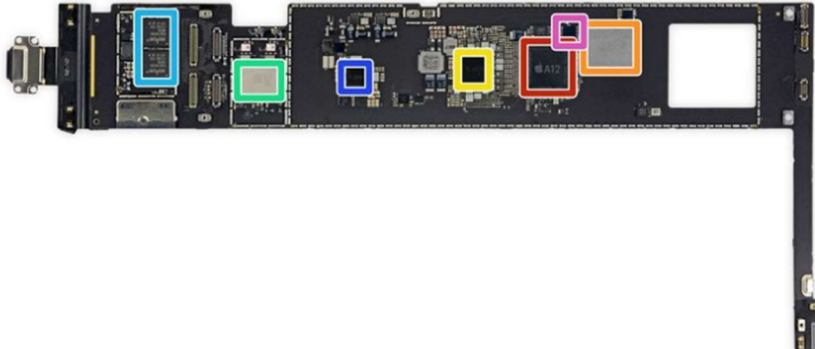
U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use						
	<div data-bbox="823 310 1734 678" data-label="Image"> </div> <ul style="list-style-type: none"> <li>● Apple APL1021 A9X 64-bit applications processor</li> </ul> <p>See <a href="https://www.ifixit.com/Teardown/iPad+Pro+9.7-Inch+Teardown/60939">https://www.ifixit.com/Teardown/iPad+Pro+9.7-Inch+Teardown/60939</a></p> <p>Apple iPad Pro 9.7-inch (5<sup>th</sup> Generation) processor:</p> <table border="1"> <tbody> <tr> <td>Chipset</td><td>Apple A9 (14 nm)</td></tr> <tr> <td>CPU</td><td>Dual-core 1.84 GHz (Twister)</td></tr> <tr> <td>GPU</td><td>PowerVR GT7600 (six-core graphics)</td></tr> </tbody> </table> <p>See <a href="https://www.gsmarena.com/apple_ipad_9_7_(2017)-8620.php">https://www.gsmarena.com/apple_ipad_9_7_(2017)-8620.php</a></p> <p>Apple iPad Pro 10.5-inch (2017) processor:</p>	Chipset	Apple A9 (14 nm)	CPU	Dual-core 1.84 GHz (Twister)	GPU	PowerVR GT7600 (six-core graphics)
Chipset	Apple A9 (14 nm)						
CPU	Dual-core 1.84 GHz (Twister)						
GPU	PowerVR GT7600 (six-core graphics)						



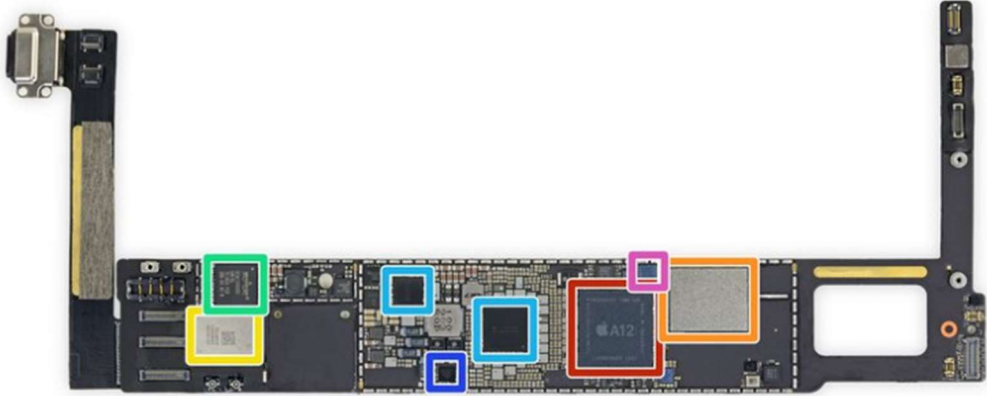
**Exhibit A – U.S. Patent 8,878,949**  
***Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR***

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<div data-bbox="768 282 1814 448"> </div> <ul style="list-style-type: none"> <li>● Apple <a href="#">APL1071</a> Apple A10X Fusion chip with 64-bit architecture and embedded M10 coprocessor</li> </ul> <p>See <a href="https://www.ifixit.com/Teardown/iPad+Pro+10.5-Inch+Teardown/92534">https://www.ifixit.com/Teardown/iPad+Pro+10.5-Inch+Teardown/92534</a></p> <p>Apple iPad 9.7-inch (6<sup>th</sup> Generation) processor:</p> <div data-bbox="831 834 1747 1205"> </div> <ul style="list-style-type: none"> <li>● Apple A10 Fusion <a href="#">APL1W24</a> SoC (also found in the <a href="#">iPhone 7</a>) with 2 GB Micron <a href="#">MT53B256M64D2TP-062 L XT:C LPDDR4</a> SDRAM layered beneath</li> </ul> <p>See <a href="https://www.ifixit.com/Teardown/iPad+6+Teardown/105416">https://www.ifixit.com/Teardown/iPad+6+Teardown/105416</a></p>

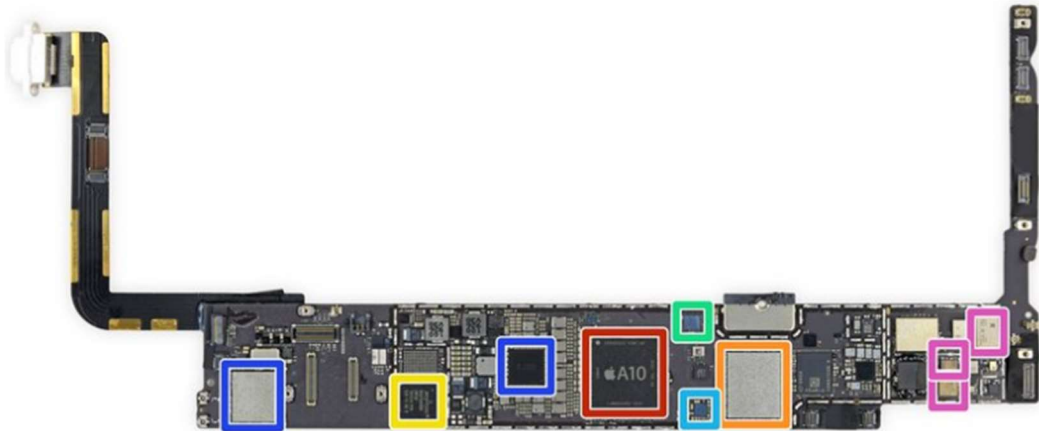
**Exhibit A – U.S. Patent 8,878,949**  
***Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR***

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use						
	<p>Apple iPad Pro 11-inch (1<sup>st</sup> Generation) processor:</p>  <p align="center">● Apple APL1083 A12X Bionic SoC</p> <p>See <a href="https://www.ifixit.com/Teardown/iPad+Pro+11-Inch+Teardown/115457">https://www.ifixit.com/Teardown/iPad+Pro+11-Inch+Teardown/115457</a></p> <p>Apple iPad Pro 11-inch (2<sup>nd</sup> Generation) processor:</p> <table border="1"> <tr> <td><b>System chip:</b></td><td>Apple A12Z Bionic APL1083 (7 nm)</td></tr> <tr> <td><b>Processor:</b></td><td>Octa-core, 2490 MHz, Vortex and Tempest, 64-bit</td></tr> <tr> <td><b>GPU:</b></td><td>Apple 8-core GPU</td></tr> </table> <p>See <a href="https://www.phonearena.com/phones/Apple-iPad-Pro-11-inch-2020_id11380">https://www.phonearena.com/phones/Apple-iPad-Pro-11-inch-2020_id11380</a></p> <p>Apple iPad Air (3<sup>rd</sup> Generation) processor:</p> 	<b>System chip:</b>	Apple A12Z Bionic APL1083 (7 nm)	<b>Processor:</b>	Octa-core, 2490 MHz, Vortex and Tempest, 64-bit	<b>GPU:</b>	Apple 8-core GPU
<b>System chip:</b>	Apple A12Z Bionic APL1083 (7 nm)						
<b>Processor:</b>	Octa-core, 2490 MHz, Vortex and Tempest, 64-bit						
<b>GPU:</b>	Apple 8-core GPU						

**Exhibit A – U.S. Patent 8,878,949**  
***Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR***

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<ul style="list-style-type: none"> <li>● Apple <a href="#">APL1W81</a> A12 Bionic SoC layered over 3 GB SK Hynix <a href="#">H9HKNNNDBMMUYR</a> LPDDR4X RAM</li> </ul> <p>See <a href="https://www.ifixit.com/Teardown/iPad+Air+3+Teardown/121759">https://www.ifixit.com/Teardown/iPad+Air+3+Teardown/121759</a>  Apple iPad mini (5<sup>th</sup> Generation) processor:</p>  <ul style="list-style-type: none"> <li>● Apple <a href="#">APL1W81</a> A12 Bionic SoC, layered over Samsung K3UH4H40AM-MGCL 3 GB LPDDR4X DRAM</li> </ul> <p>See <a href="https://www.ifixit.com/Teardown/iPad+Mini+5+Teardown/121589">https://www.ifixit.com/Teardown/iPad+Mini+5+Teardown/121589</a>  Apple iPad (7<sup>th</sup> Generation) processor:</p>




**Exhibit A – U.S. Patent 8,878,949**  
***Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR***

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	 <ul style="list-style-type: none"> <li>● Apple A10 Fusion APL1W24 SoC layered over Micron <b>D9WQC</b> (MT53B384M64D4TP-062 XT:E) 3 GB LPDDR4 SDRAM (that's <b>50% more RAM</b> than last year)</li> </ul> <p>See <a href="https://www.ifixit.com/Teardown/iPad+7+Teardown/126291">https://www.ifixit.com/Teardown/iPad+7+Teardown/126291</a></p>
1[c] determine a gesture has been performed in the electro-optical sensor field of view based on the electro-optical sensor output, and	<p>The Accused Instrumentalities determine a gesture has been performed in the electro-optical sensor field of view based on the electro-optical sensor output.</p> <p>Specifically, each of the Accused Instrumentalities use its Processors or Systems-On-Chips, Cameras, and/or Sensors (<i>see</i> SIC, Identification of Accused Instrumentalities) to determine a gesture has been performed in the electro-optical sensor field of view based on the electro-optical sensor output. In order to determine that a gesture has been performed, the Accused Instrumentalities also require the functionality of Apple's iOS operating system.</p> <p>The gestures corresponding to an image capture command that can be determined by the Accused Instrumentalities and used to control the digital camera include those associated with performance of, but</p>

**Exhibit A – U.S. Patent 8,878,949**  
**Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR**

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<p>not limited to, the following features: capturing photos including capturing photos using third-party applications, Apple's Face ID, and Apple's Memojis, and Animojis.</p> <p><i>See, e.g.,</i>  <a href="https://www.apple.com/iphone-11/specs/">https://www.apple.com/iphone-11/specs/</a>  <a href="https://www.cnet.com/news/apple-face-id-truedepth-how-it-works/">https://www.cnet.com/news/apple-face-id-truedepth-how-it-works/</a>  <a href="https://apps.apple.com/us/app/gocam-by-crunchfish/id883157865">https://apps.apple.com/us/app/gocam-by-crunchfish/id883157865</a>  <a href="https://developer.apple.com/documentation/vision/detecting_hand_poses_with_vision">https://developer.apple.com/documentation/vision/detecting_hand_poses_with_vision</a>  <a href="https://support.apple.com/en-us/HT208986">https://support.apple.com/en-us/HT208986</a>  <a href="https://support.apple.com/en-us/HT208109">https://support.apple.com/en-us/HT208109</a>  <a href="https://support.apple.com/en-us/102381">https://support.apple.com/en-us/102381</a></p> <p>The gestures that can be determined by the Accused Instrumentalities also include the gestures associated with, for example, the third-party application GoCam by Crunchfish, which is available on Apple's App Store. This application enables users to capture photos using hand gestures. This application requires iOS 8.0 or later. <a href="https://apps.apple.com/us/app/gocam-by-crunchfish/id883157865">https://apps.apple.com/us/app/gocam-by-crunchfish/id883157865</a>. The iPhone 6 released with iOS 8. <a href="https://en.wikipedia.org/wiki/IPhone_6">https://en.wikipedia.org/wiki/IPhone_6</a>. The GoCam app launched on July 3, 2014. <a href="https://apptopia.com/ios/app/883157865/about">https://apptopia.com/ios/app/883157865/about</a>.</p>

**Exhibit A – U.S. Patent 8,878,949**  
**Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR**

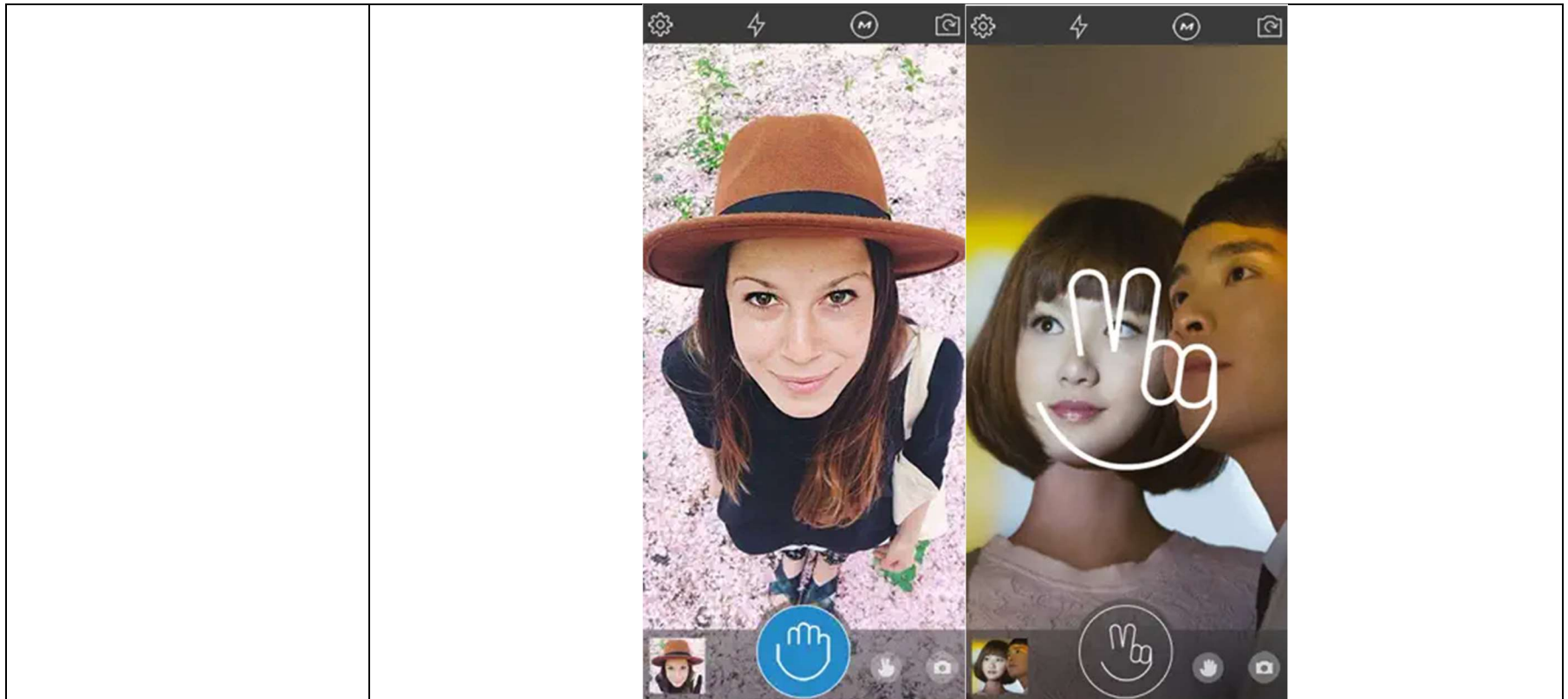
U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use		
	<p align="center">Capture photos from a distance with gestures</p> 	<p align="center">Quickly capture a photo with a v-sign gesture</p> 	<p align="center">Conveniently share or delete latest photo</p> 

**Exhibit A – U.S. Patent 8,878,949**  
**Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR**

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<p>GoCam by Crunchfish lets you capture and browse photos from a distance with hand gestures.</p> <p>This is how it's done:</p> <ul style="list-style-type: none"> <li>- The built in camera on your iPhone or iPad detects your gestures</li> <li>- Centre your hand at least 30 cm from the camera on your device</li> <li>- A slight wave of your hand helps GoCam detect you, especially in dim lighting</li> <li>- Use touchless at up to three meters</li> </ul> <p>PHOTO &amp; VIDEO</p> <ul style="list-style-type: none"> <li>- Do a "Grab" gesture to capture photos or videos together with your friends</li> <li>- Do a "V-sign" gesture for a quick snap</li> <li>- You can also use touch to take photos using the hand icon</li> </ul> <p>GALLERY</p> <ul style="list-style-type: none"> <li>- Browse through your photos with a swipe gesture</li> <li>- Show a thumbs up gesture to mark photo as favorite</li> </ul> <p>ALLOW GOCAM TO</p> <ul style="list-style-type: none"> <li>- Access the camera - to take photos and control your device with gestures</li> <li>- Access your photos - to save and share photos with GoCam users in the gallery</li> </ul> <p>FEEDBACK</p> <ul style="list-style-type: none"> <li>- Say Hi on <a href="mailto:gocam@crunchfish.com">gocam@crunchfish.com</a> and tell us about your GoCam experience!</li> </ul> <p>GoCam is recommended for iPhone 5 and up, iPad 4 and up, iPad mini and up.</p> <p>See, e.g., <a href="https://apps.apple.com/us/app/gocam-by-crunchfish/id883157865">https://apps.apple.com/us/app/gocam-by-crunchfish/id883157865</a></p> <p>The gestures that can be determined by the Accused Instrumentalities also include the gestures associated with, for example, the third-party application MOMAX cam by Crunchfish, which is available on Apple's App Store. This application enables users to capture photos using hand gestures. MOMAX cam requires iOS 8.0 or later and is recommended for iPhone 5 and later. MOMAX cam launched on May 28, 2015. <a href="https://apps.apple.com/us/app/gocam-by-crunchfish/id883157865">https://apps.apple.com/us/app/gocam-by-crunchfish/id883157865</a>.</p>



Exhibit A – U.S. Patent 8,878,949  
*Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR*



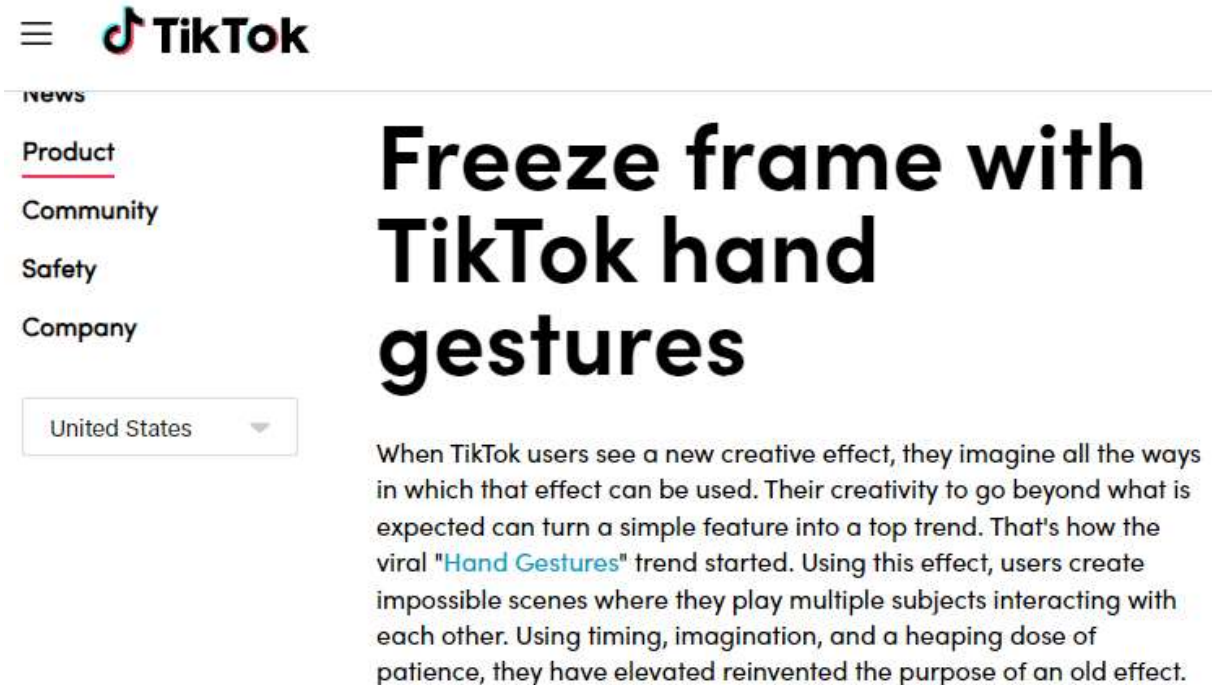


**Exhibit A – U.S. Patent 8,878,949**  
**Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR**

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<p>Congratulations! Download MOMAX cam now to start capturing great photos with your MOMAX SelfiFit Pod.</p> <p>You have multiple ways to capture photos and shoot videos with MOMAX cam.</p> <ol style="list-style-type: none"> <li>1. Use it like your iPhone camera with the touch button</li> <li>2. Use the bluetooth trigger that comes with your MOMAX SelfiFit Pod</li> <li>3. Use Crunchfish innovative gesture technology to remotely trigger camera from up to 3m.</li> </ol> <p>This is how to use gesture control:</p> <p>Raise your hand - make sure it's visible on the screen - when you get a blue sign, close your hand to trigger the camera</p> <p>Make a thumbs-up to like photos in your photo gallery</p> <p>V-sign gesture to instantly capture a photo available as an in-app purchase.</p> <p>MOMAX cam requires iOS8 and is recommended for iPhone 5 and later.  Gesture technology designed with love by CRUNCHFISH.</p> <p>See, e.g., <a href="https://apps.apple.com/us/app/momax-cam/id983544743">https://apps.apple.com/us/app/momax-cam/id983544743</a></p> <p>Additional third-party applications that use the Accused Instrumentalities to determine gestures includes the TikTok Application that uses the freeze frame feature:</p>

## Exhibit A – U.S. Patent 8,878,949

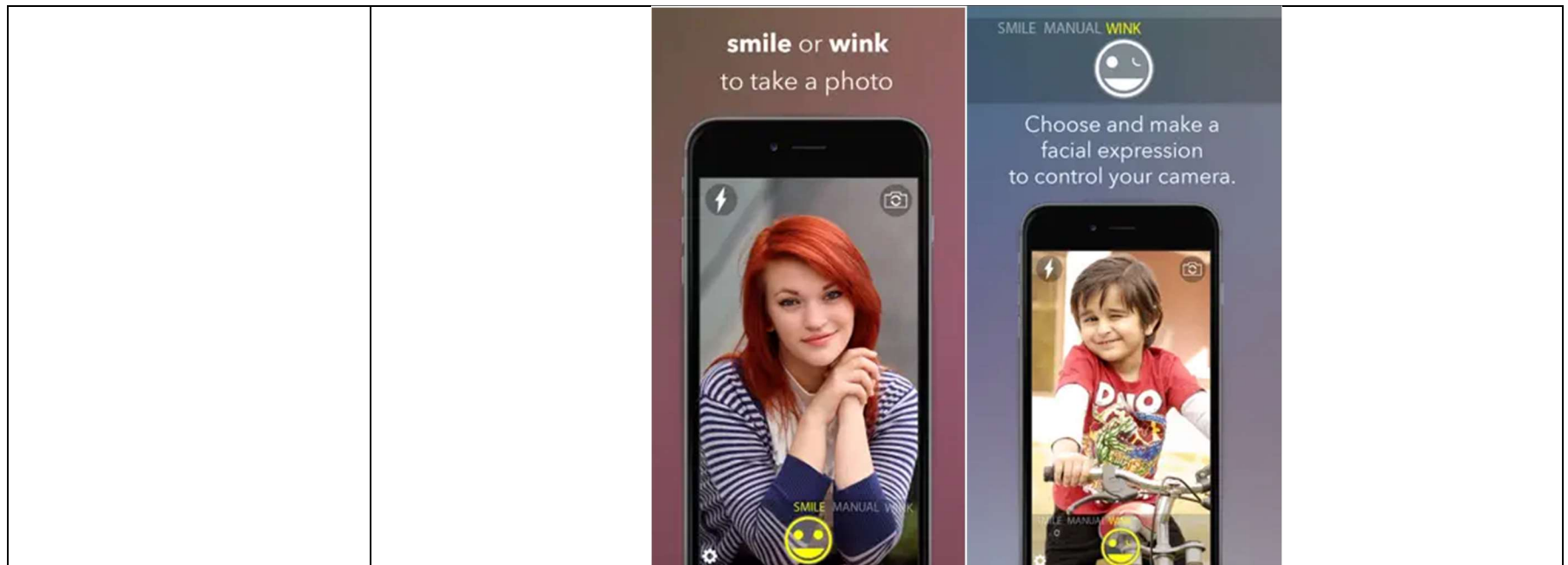
*Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR*

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	 <p>The screenshot shows the TikTok website's 'news' section. The left sidebar contains links for 'news', 'Product' (underlined), 'Community', 'Safety', and 'Company'. Below these links is a dropdown menu set to 'United States'. The main content area features a large heading 'Freeze frame with TikTok hand gestures' and a paragraph of text: 'When TikTok users see a new creative effect, they imagine all the ways in which that effect can be used. Their creativity to go beyond what is expected can turn a simple feature into a top trend. That's how the viral "Hand Gestures" trend started. Using this effect, users create impossible scenes where they play multiple subjects interacting with each other. Using timing, imagination, and a heaping dose of patience, they have elevated reinvented the purpose of an old effect.'</p>

**Exhibit A – U.S. Patent 8,878,949**  
***Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR***

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	 <p>See, e.g., <a href="https://newsroom.tiktok.com/en-us/freeze-frame-with-tiktok-hand-gestures">https://newsroom.tiktok.com/en-us/freeze-frame-with-tiktok-hand-gestures</a>:</p> <p>The gestures that can be determined by the Accused Instrumentalities also include the gestures associated with the third-party application FaceCam by Prithiv Dev Devendran, which is available on Apple's App Store. This application enables users to capture photos using face gestures. FaceCam requires iOS 8.0 or later. FaceCam launched on September 11, 2014. See <a href="https://apps.apple.com/us/app/facecam-take-hands-free-photos-and-selfies/id908027969">https://apps.apple.com/us/app/facecam-take-hands-free-photos-and-selfies/id908027969</a>.</p>

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***Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR***



**Exhibit A – U.S. Patent 8,878,949**  
**Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR**

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<p>Control the camera using your face.  With FaceCam simply smile or wink to take amazing photos and selfies without even using your hands.It's a intelligent camera that can read your face.</p> <p>Ever wanted to control the camera using your face?  Ever wanted to take pictures without using your hands?  Ever wanted a camera that can read your face expressions?  Now you can with FaceCam,it's a fun and new way to take photos and selfies.</p> <p>FaceCam uses iOS's face detection technology to recognise facial expressions that you make in real time.This feature allows it to know when the person wants to take a photo.  You can use FaceCam at a great distance,just select a expression and place the device at your desired position and distance then make the expression,FaceCam will intelligently read your face and take that as a command to take a photo.It's pretty awesome.</p> <p>FaceCam also comes along with a great photo editor,so that you can trim your photos with beautiful filters,frames and adjust them.It can also share your photos to Twitter,Facebook and best of all it can send the photo to Instagram.</p> <p>INSTRUCTIONS:</p> <ul style="list-style-type: none"> <li>-Choose any facial expression by swiping left or right,and FaceCam will start reading your face for that specific expression.</li> <li>-Place the device at any position and distance(not too far) you want.</li> <li>-Make the expression,for example if you chose wink just wink at the camera and a three second timer to take a photo will start.It's that easy.</li> </ul> <p><a href="https://apps.apple.com/us/app/facecam-take-hands-free-photos-and-selfies/id908027969">https://apps.apple.com/us/app/facecam-take-hands-free-photos-and-selfies/id908027969</a></p>

**Exhibit A – U.S. Patent 8,878,949**  
**Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR**

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<p>The gestures that can be determined by the Accused Instrumentalities further include the gestures associated with <b>Face ID</b>, which, for example, unlocks a user's phone when it detects the user's face. More specifically, when performing the Face ID functionality, the processing unit within the device housing of the Accused Instrumentalities determines that a gesture has been performed in the electro-optical sensor field of view based on the electro-optical sensor output in multiple ways, where each way is a separate and distinct infringement.</p> <p>As a first example, the screen-side visible light camera (which, in this example, functions as the electro-optical sensor of claim 1) provides an electro-optical sensor output to the processing unit, which confirms the presence of a face based on the output of the screen-side visible-light camera, and also confirms that a gesture has been performed by the face in the screen-side visible-light camera's field of view by determining that the eyes of the face are open and the face's attention is directed towards the device:</p> <ul style="list-style-type: none"> <li>● We turn our attention to the top of the phone to find the much anticipated <a href="#">mini Kinect</a> TrueDepth camera system! This system rallies a team of sensors to bring facial recognition to the X.</li> <li>● Step one in this system: the flood illuminator embedded in the display blasts your face with infrared (IR) light.</li> <li>● Next, the front-facing camera, marked in red, confirms the presence of a face.</li> <li>● Then the IR dot projector, far right, projects a grid of dots over your face to <a href="#">create a three-dimensional map</a>.</li> <li>● Finally, the IR camera on the left reads this map, and sends the data to the phone.</li> </ul> <p>See <a href="https://www.ifixit.com/Teardown/iPhone+X+Teardown/98975">https://www.ifixit.com/Teardown/iPhone+X+Teardown/98975</a></p>



**Exhibit A – U.S. Patent 8,878,949**  
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	<p>“With a simple glance, Face ID securely unlocks your iPhone or iPad Pro. ... Face ID requires that the TrueDepth camera sees your face or your eyes, whether your device is lying on a surface or you're holding it in a natural position. ... Face ID recognizes if your eyes are open and your attention is directed towards the device.” <a href="https://support.apple.com/en-us/102381">https://support.apple.com/en-us/102381</a></p> <p>After the processing unit confirms that a gesture has been performed by the face in the screen-side visible-light camera’s field of view, then the processing unit controls the IR camera (which, in this example, functions as the digital camera of claim 1) in response to the gesture performed in the electro-optical sensor field of view. Specifically, the IR camera captures an infrared image of the face: “The TrueDepth camera captures accurate face data by projecting and analyzing thousands of invisible dots to create a depth map of your face and also captures an infrared image of your face.” <a href="https://support.apple.com/en-us/102381">https://support.apple.com/en-us/102381</a>.</p> <p>With Face ID, the eyes of the face being open and the face’s attention being directed towards the device corresponds to an image capture command. Such an image capture command causes the digital camera to store an image to memory. “Each time you unlock your device, the TrueDepth camera recognizes you by capturing accurate depth data and an infrared image” <a href="https://support.apple.com/en-us/102381">https://support.apple.com/en-us/102381</a></p> <p>In addition, during initial setup of FaceID, and throughout the usage of Face ID, FaceID stores an image of the face to memory in response to the image capture command: “During initial setup, the user's face is scanned twice from a number of angles to create a complete reference map. As the system is used, it learns about typical variations in a user's appearance, and will adjust its registered face data to match aging, facial hair growth, and other changes using the Neural Engine.” <a href="https://en.wikipedia.org/wiki/Face_ID">https://en.wikipedia.org/wiki/Face_ID</a></p> <p>As a second example, the electro-optical sensor is a part of a camera module housing (e.g., True Depth camera), and is separate from the digital camera that is also part of the camera module housing. The True Depth camera contains a CMOS electro-optical sensing array that is used to electro-optically monitor the camera’s field of view. The CMOS electro-optical sensing array contains an electro-optical sensor that captures the image used to detect the gesture (e.g., the eyes of the face being open and the face’s attention being directed towards the device). The electro-optical sensor and the digital camera are both part of the same True Depth camera module housing, with the electro-optical sensor and the digital camera as separate components both in the same device housing.</p>

## Exhibit A – U.S. Patent 8,878,949

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	<p>The CMOS electro-optical sensing array provides an electro-optical sensor output to the processing unit, which confirms that a gesture has been performed by the face in the CMOS electro-optical sensing array's field of view, by determining that the eyes of the face are open and the face's attention is directed towards the device. After the processing unit confirms that a gesture has been performed by the face in the CMOS electro-optical sensing array's field of view, then the processing unit controls the digital camera in response to the gesture performed in the CMOS electro-optical sensing array's field of view. Specifically, the digital camera of the screen-side infrared camera housing captures an infrared image of the face. With Face ID, the eyes of the face being open and the face's attention being directed towards the device corresponds to an image capture command. Such an image capture command causes the digital camera to store an image to memory. In addition, during initial setup of FaceID, and throughout the usage of Face ID, FaceID stores an image of the face to memory in response to the image capture command. See <a href="https://en.wikipedia.org/wiki/Face_ID">https://en.wikipedia.org/wiki/Face_ID</a></p> <p>Similarly, <b>Animojis/Memojis</b> are created in response to a gesture as Face ID sensors are used to “map your face and capture your expressions to animate the Animoji.” <a href="https://www.lifewire.com/animoji-4153078">https://www.lifewire.com/animoji-4153078</a>. “Face ID is a facial recognition system designed and developed by Apple Inc. for the iPhone and iPad Pro. The system allows biometric authentication for ... providing detailed facial expression tracking for Animoji, as well as six degrees of freedom (6DOF) head-tracking, eye-tracking, and other features. ... Face ID can be used without authentication to track over 50 aspects of a user's facial expression and positioning, which can be used to create live effects such as Animoji or camera filters. <a href="https://en.wikipedia.org/wiki/Face_ID">https://en.wikipedia.org/wiki/Face_ID</a> “Animoji leverages the TrueDepth camera system used for Face ID, as well as the chip inside a compatible iPhone, to capture and analyse more than 50 different muscle movements in your face. It then mirrors your expressions in different emoji to produce Animoji so we suppose they could be called a Face ID emoji.” <a href="https://www.pocket-lint.com/what-are-animoji-how-to-create-use-apples-animated-emoji/">https://www.pocket-lint.com/what-are-animoji-how-to-create-use-apples-animated-emoji/</a></p> <p>More specifically, when performing the Animojis/Memojis functionality, the processing unit within the device housing of the Accused Instrumentalities determines that a gesture has been performed in the electro-optical sensor field of view based on the electro-optical sensor output in multiple ways, where each way is separate and distinct infringement:</p>



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	<p>As a first example, the screen-side visible light camera (which, in this example, functions as the electro-optical sensor of claim 1) provides an electro-optical sensor output to the processing unit, which confirms the presence of a face based on the output of the screen-side visible-light camera, and also confirms that a gesture has been performed by the face in the screen-side visible-light camera's field of view by determining that at least one of the over 50 aspects of a user's facial expression and positioning has changed. After the processing unit confirms that a gesture has been performed by the face in the screen-side visible-light camera's field of view, then the processing unit controls the IR camera (which, in this example, functions as the digital camera of claim 1) in response to the gesture performed in the electro-optical sensor field of view. Specifically, the IR camera captures an infrared image of the face. With Animojis/Memojis, a change in at least one of the over 50 aspects of a user's facial expression and positioning corresponds to an image capture command. Such an image capture command causes the IR camera to store an image to memory, which corresponds to the next frame of the animated Animojis/Memojis.</p> <p>As a second example, the electro-optical sensor is a part of a camera module housing (e.g., True Depth camera), and is separate from the digital camera that is also part of the camera module housing. The True Depth camera contains a CMOS electro-optical sensing array that is used to electro-optically monitor the camera's field of view. The CMOS electro-optical sensing array contains an electro-optical sensor that captures the image used to detect the gesture (e.g., a change in at least one of the over 50 aspects of a user's facial expression and positioning). The electro-optical sensor and the digital camera are both part of the same True Depth camera module housing, with the electro-optical sensor and the digital camera as separate components both in the same device housing.</p> <p>The CMOS electro-optical sensing array provides an electro-optical sensor output to the processing unit, which confirms that a gesture has been performed by the face in the CMOS electro-optical sensing array's field of view, by determining a change in at least one of the over 50 aspects of a user's facial expression and positioning. After the processing unit confirms that a gesture has been performed by the face in the CMOS electro-optical sensing array's field of view, then the processing unit controls the digital camera in response to the gesture performed in the CMOS electro-optical sensing array's field of view. Specifically, the digital camera of the True-Depth camera housing captures an infrared image of the face. With Animojis/Memojis, a change in at least one of the over 50 aspects of a user's facial expression and positioning corresponds to an image capture command. Such an image capture command causes the IR</p>

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	<p>camera to store an image to memory, which corresponds to the next frame of the animated Animojis/Memojis.</p> <p>The gestures that can be determined by the Accused Instrumentalities further include the gestures associated with <b>3<sup>rd</sup> party applications</b>, which capture photographs in response to a gesture performed in the electro-optical sensor field of view. More specifically, when a third-party application performs the capture photograph functionality, the processing unit within the device housing of the Accused Instrumentalities determines that a gesture has been performed in the electro-optical sensor field of view based on the electro-optical sensor output in multiple ways, where each way is a separate and distinct infringement.</p> <p>As a first example, the Proximity Sensor, Ambient Light Sensor, Backside Illumination Sensor, True Depth camera, infrared camera, or one of the other visible-light cameras not used to store an image to memory (which, in this example, functions as the electro-optical sensor of claim 1) provides an electro-optical sensor output to the processing unit, which confirms the presence of a gesture (e.g., facial-gesture or hand-gesture) based on the output of the electro-optical sensor. After the processing unit confirms that a gesture has been performed by the electro-optical sensor's field of view, then the processing unit controls the visible-light camera (e.g., Screen-side visible light camera, Wide Angle camera, Ultra-wide camera, Telephoto camera) (which, in this example, functions as the digital camera of claim 1) in response to the gesture performed in the electro-optical sensor field of view. Specifically, the visible light camera captures an image of the face. With 3<sup>rd</sup> party applications, a gesture (e.g., facial-gesture or hand-gesture) corresponds to an image capture command. Such an image capture command causes the visible-light camera to store an image to memory.</p> <p>As a second example, the electro-optical sensor is a part of a camera module housing (e.g., Screen-side visible light camera, Wide Angle camera, Ultra-wide camera, Telephoto camera), and is separate from the digital camera that is also part of the camera module housing. The camera modules (e.g., Screen-side visible light camera, Wide Angle camera, Ultra-wide camera, Telephoto camera) each contain a CMOS electro-optical sensing array that is used to electro-optically monitor the camera's field of view. Each visible-light camera contains an electro-optical sensor that captures the image used to detect the gesture (e.g., , facial-gesture or hand-gesture). The electro-optical sensor and the digital camera are both part of</p>

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	<p>the same camera module housing, with the electro-optical sensor and the digital camera as separate components both in the same device housing.</p> <p>The CMOS electro-optical sensing array provides an electro-optical sensor output to the processing unit, which confirms that a gesture has been performed by the face in the CMOS electro-optical sensing array's field of view. After the processing unit confirms that a gesture has been performed (e.g., by a hand or by the face) in the CMOS electro-optical sensing array's field of view, then the processing unit controls the digital camera in response to the gesture performed in the CMOS electro-optical sensing array's field of view. Specifically, the digital camera of the camera module housing captures an image of the face. With 3<sup>rd</sup> party applications, a gesture (e.g., facial-gesture or hand-gesture) corresponds to an image capture command. Such an image capture command causes the visible-light camera to store an image to memory.</p> <p>This limitation may also be informed by source code, and GTP reserves the right to assert additional theories under the doctrine of equivalents in response to claim construction positions that Apple may adopt or the production of source code for software-based limitations. <i>See</i> L.P.R. 3.6.</p> <p><b><u>Indirect Infringement</u></b></p> <p>GTP also contends that Apple indirectly infringes claim 4 of the '949 Patent because Apple's users, customers, and business partners were provided the Accused Instrumentalities by Apple during at least some time periods within February 4, 2015 to May 11, 2020. Apple actively encouraged and instructed these users, customers, and business partners to use the Accused Instrumentalities in ways that directly infringe claim 4 of the '949 Patent. Examples include Apple's online instructions on its website and app store for the Accused Instrumentalities, including instructions regarding the use of Apple's Face ID and Apple's Memojis, and Animojis (<i>see, e.g.,</i> <a href="https://support.apple.com/en-us/HT208986">https://support.apple.com/en-us/HT208986</a> and <a href="https://support.apple.com/en-us/HT208109">https://support.apple.com/en-us/HT208109</a>), as well as information Apple provided to its business partners both publicly on its websites and privately regarding APIs that are configured for recognizing gestures. Apple specifically intended and induced its users, customers, and business partners to use the portable device of at least claim 4 of the '949 Patent through the normal and customary use of the Accused Instrumentalities by the users, customers, and/or business partners.</p> <p>With regard to third-party applications (e.g., TikTok Application, GoCam by Crunchfish, MOMAX cam by Crunchfish), Apple further induced the making and using of the accused systems by Apple's users,</p>

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	<p>customers, and business partners (to whom Apple provides the third-party applications through Apple’s App Store) in order for the users, customers, and business partners to install and use one or more of the 3<sup>rd</sup> party applications on the Accused Instrumentalities. For Apple’s inducement with respect to 3<sup>rd</sup> party applications, the direct infringer is Apple’s users, customers, or business partners.</p> <p>Apple also indirectly infringes through contributory infringement by providing or having provided third-party applications (e.g., TikTok Application, GoCam by Crunchfish, MOMAX cam by Crunchfish), or providing or having provided specific software components that are part of the third-party applications, that are not a staple article of commerce and have no substantial non-infringing use, in order to be combined by Apple’s users, customers, and business partners with the other claimed elements (e.g., Accused Instrumentalities) so as to assemble and make the claimed portable device. The third-party applications are components since software may be a “component” under section 271(c). <i>See, e.g., Robocast, Inc., v. Microsoft Corp.</i>, 21 F.Supp.3d 320, 331-32 (D. Del. 2014); <i>i4i Ltd. Partnership v. Microsoft Corp.</i>, 670 F. Supp. 2d 568, 580 (E.D. Tex. 2009), <i>aff’d</i>, 598 F.3d 831, 849 (Fed. Cir. 2010). The specific software components of the 3<sup>rd</sup> party applications are also components, since software programs may be made up of smaller software units, each of which may also be a “component” under the statute. <i>See Lucent Techs., Inc. v. Gateway, Inc.</i>, 580 F.3d 1301, 1320 (Fed. Cir. 2009) (concluding that proper “component” for contributory infringement analysis was the date picker feature in Microsoft Outlook, not Microsoft Outlook as a whole). In addition, “an infringer ‘should not be permitted to escape liability as a contributory infringer merely by embedding [the infringing apparatus] in a larger product with some additional, separable feature before importing and selling it.’” <i>Id.</i> (quoting <i>Ricoh Co. v. Quanta Computer Inc.</i>, 550 F.3d 1325, 1337 (Fed. Cir. 2008)). For Apple’s contributory infringement with respect to 3<sup>rd</sup> party applications, the direct infringer is Apple’s users, customers, or business partners.</p> <p>GTP also contends that Apple infringes claim 4 of the ’949 Patent under 35 U.S.C §271(f)(1), by supplying or causing to be supplied in or from the United States (during at least some time periods within February 4, 2015 to May 11, 2020) all or a substantial portion of the components of a claim 4 of the ’949 Patent, where such components are uncombined in whole or in part, in such manner as to actively induce the combination of such components outside of the United States in a manner that would infringe the patent if such combination occurred within the United States. First, Apple supplies, or causes to be supplied, the foregoing equipment (e.g., Accused Instrumentalities) to Apple’s users, customers, or business partners outside the United States. In addition, Apple operates data centers in the United States where updates to Apple’s iOS operating system as well as third-party applications (e.g., TikTok Application, GoCam by</p>

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	<p>Crunchfish, MOMAX cam by Crunchfish) are supplied to Apple’s users, customers, or business partners outside the United States. For example, under information and belief, in the United States Apple operates at least five data centers in or near the cities of Reno, Nevada; Maiden, North Carolina; Mesa, Arizona; Prineville, Oregon; and Newark, California. See <a href="https://dgtlinfra.com/apple-data-center-locations/">https://dgtlinfra.com/apple-data-center-locations/</a>. Under information and belief, Apple’s United States based data centers provide Apple’s iOS operating system as well as third-party applications to Apple’s users, customers, or business partners outside the United States through Apple’s App Store and Apple’s operating system update processes. The Accused Instrumentalities, Apple’s iOS operating system, and the third-party applications are each components that are uncombined in whole or in part, where the combination of such components outside of the United States would infringe claim 4 of the ’949 Patent if such combination occurred within the United States. Unlike <i>Microsoft Corp. v. AT&amp;T Corp.</i>, the copy of the iOS operating system, or third-party application, that Apple’s users, customers, or business partners download from Apple’s servers is what is installed in the Accused Instrumentality. See <i>Microsoft Corp. v. AT&amp;T Corp.</i>, 550 U.S. 437, 442 (2007) (“The master disk or electronic transmission Microsoft sends from the United States is never installed on any of the foreign-made computers in question. Instead, copies made abroad are used for installation. Because Microsoft does not export from the United States the copies actually installed, it does not ‘suppl[y] ... from the United States’ ‘components’ of the relevant computers, and therefore is not liable under § 271(f) as currently written.”). In addition, unlike <i>Life Technologies Corp. v. Promega Corp.</i>, Apple supplies the Accused Instrumentality, the iOS operating system, and the third-party applications and APIs to Apple’s users, customers, or business partners outside the United States. See <i>Life Technologies Corp. v. Promega Corp.</i>, 137 S. Ct. 734, 743 (2017) (a “substantial portion of the components of a patented invention” in Section 271(f)(1) had “a quantitative, not a qualitative meaning” and did “not cover the supply of a single component of a multicomponent invention.”). Here, Apple supplies the Accused Instrumentality, the iOS operating system, and the third-party applications to Apple’s users, customers, or business partners outside the United States. Even if Apple does not supply or cause to be supplied the foregoing equipment (e.g., Accused Instrumentality) in or from the United States, Apple still provides the iOS operating system, and the third-party applications to Apple’s users, customers, or business partners outside the United States, which subjects Apple to liability under 35 U.S.C 271(f)(1).</p> <p>GTP also contends that Apple infringes claim 4 of the ’949 Patent under 35 U.S.C §271(f)(2), by supplying or causing to be supplied in or from the United States (during at least some time periods within February 4, 2015 to May 11, 2020) the third-party applications (e.g., TikTok Application, GoCam by Crunchfish, MOMAX cam by Crunchfish) that are especially made or especially adapted for use in the invention of</p>

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	<p>claim 4 of the '949 Patent, and are not a staple article or commodity of commerce suitable for substantial noninfringing use, where the third-party applications are uncombined in whole or in part, knowing that the third-party applications are so made or adapted and intending that such component will be combined outside of the United States in a manner that would infringe the patent if such combination occurred within the United States. Apple operates data centers in the United States where third-party applications (e.g., TikTok Application, GoCam by Crunchfish, MOMAX cam by Crunchfish) are supplied to Apple's users, customers, or business partners outside the United States. For example, under information and belief, in the United States Apple operates at least five data centers in or near the cities of Reno, Nevada; Maiden, North Carolina; Mesa, Arizona; Prineville, Oregon; and Newark, California. <i>See</i> <a href="https://dgtlinfra.com/apple-data-center-locations/">https://dgtlinfra.com/apple-data-center-locations/</a>. Under information and belief, Apple's United States based data centers provide third-party applications to Apple's users, customers, or business partners outside the United States through Apple's App Store and Apple's operating system update processes. The third-party applications are each a component of the invention of claim 4 of the '949 Patent that is especially made or especially adapted for use in the invention, and not a staple article or commodity of commerce suitable for substantial noninfringing use. Unlike <i>Microsoft Corp. v. AT&amp;T Corp.</i>, the third-party applications that Apple's users, customers, or business partners download from Apple's servers is what is installed in the Accused Instrumentality. <i>See Microsoft Corp. v. AT&amp;T Corp.</i>, 550 U.S. 437, 442 (2007) ("The master disk or electronic transmission Microsoft sends from the United States is never installed on any of the foreign-made computers in question. Instead, copies made abroad are used for installation. Because Microsoft does not export from the United States the copies actually installed, it does not 'suppl[y] ... from the United States' 'components' of the relevant computers, and therefore is not liable under § 271(f) as currently written.").</p> <p>GTP also contends that Apple infringes claim 4 of the '949 Patent under 35 U.S.C §271(f)(2), by supplying or causing to be supplied in or from the United States (during at least some time periods within February 4, 2015 to May 11, 2020) the Face ID and Memojis/Animojis software components of the iOS operating system or APIs that are configured for recognizing gestures, that are especially made or especially adapted for use in the invention of claim 4 of the '949 Patent, and are not a staple article or commodity of commerce suitable for substantial noninfringing use, where iOS operating system containing the Face ID and Memojis/Animojis components or APIs that are configured for recognizing gestures are uncombined in whole or in part, knowing that the Face ID and Memojis/Animojis components or APIs that are configured for recognizing gestures of the iOS operating system are so made or adapted, and intending that the iOS operating system containing such components will be combined outside of the United States in a manner</p>



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	<p>that would infringe the patent if such combination occurred within the United States. The specific software components of the iOS operating system are also components, since software programs may be made up of smaller software units, each of which may also be a “component” under the statute. <i>See Lucent Techs., Inc. v. Gateway, Inc.</i>, 580 F.3d 1301, 1320 (Fed. Cir. 2009) (concluding that proper “component” for contributory infringement analysis was the date picker feature in Microsoft Outlook, not Microsoft Outlook as a whole). Apple operates data centers in the United States where the iOS operating system containing the Face ID and Memojis/Animojis components or APIs that are configured for recognizing gestures are supplied to Apple’s users, customers, or business partners outside the United States. For example, under information and belief, in the United States Apple operates at least five data centers in or near the cities of Reno, Nevada; Maiden, North Carolina; Mesa, Arizona; Prineville, Oregon; and Newark, California. <i>See</i> <a href="https://dgtlinfra.com/apple-data-center-locations/">https://dgtlinfra.com/apple-data-center-locations/</a>. Under information and belief, Apple’s United States based data centers provide the iOS operating system containing the Face ID and Memojis/Animojis components to Apple’s users, customers, or business partners outside the United States through Apple’s operating system update processes. The Face ID and Memojis/Animojis components or APIs that are configured for recognizing gestures are each a component of the invention of claim 4 of the ’949 Patent that is especially made or especially adapted for use in the invention, and not a staple article or commodity of commerce suitable for substantial noninfringing use. Unlike <i>Microsoft Corp. v. AT&amp;T Corp.</i>, the iOS operating system (containing the Face ID and Memojis/Animojis components) that Apple’s users, customers, or business partners download from Apple’s servers is what is installed in the Accused Instrumentality. <i>See Microsoft Corp. v. AT&amp;T Corp.</i>, 550 U.S. 437, 442 (2007) (“The master disk or electronic transmission Microsoft sends from the United States is never installed on any of the foreign-made computers in question. Instead, copies made abroad are used for installation. Because Microsoft does not export from the United States the copies actually installed, it does not ‘suppl[y] ... from the United States’ ‘components’ of the relevant computers, and therefore is not liable under § 271(f) as currently written.”).</p>
1[d] control the digital camera in response to the gesture performed in the electro-optical sensor field of view, wherein the gesture corresponds to an image capture command, and	<p>The Accused Instrumentalities control the digital camera in response to the gesture performed in the electro-optical sensor field of view, wherein the gesture corresponds to an image capture command, and wherein the image capture command causes the digital camera to store an image to memory.</p> <p>Specifically, each of the Accused Instrumentalities use its Processors or Systems-On-Chips, Cameras, and/or Sensors (<i>see</i> SIC, Identification of Accused Instrumentalities) to determine a gesture has been performed in the electro-optical sensor field of view based on the electro-optical sensor output. In order</p>

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<p>wherein the image capture command causes the digital camera to store an image to memory.</p>	<p>to determine that a gesture has been performed, the Accused Instrumentalities also require the functionality of Apple's iOS operating system.</p> <p>The gestures corresponding to an image capture command that can be determined by the Accused Instrumentalities and used to control the digital camera include those associated with performance of, but not limited to, the following features: capturing photos, Face ID, and Memojis, and Animojis.</p> <p><i>See, e.g.,</i>  <a href="https://www.apple.com/iphone-11/specs/">https://www.apple.com/iphone-11/specs/</a>  <a href="https://www.cnet.com/news/apple-face-id-truedepth-how-it-works/">https://www.cnet.com/news/apple-face-id-truedepth-how-it-works/</a>  <a href="https://apps.apple.com/us/app/gocam-by-crunchfish/id883157865">https://apps.apple.com/us/app/gocam-by-crunchfish/id883157865</a>  <a href="https://developer.apple.com/documentation/vision/detecting_hand_poses_with_vision">https://developer.apple.com/documentation/vision/detecting_hand_poses_with_vision</a>  <a href="https://support.apple.com/en-us/HT208986">https://support.apple.com/en-us/HT208986</a>  <a href="https://support.apple.com/en-us/HT208109">https://support.apple.com/en-us/HT208109</a>  <a href="https://support.apple.com/en-us/102381">https://support.apple.com/en-us/102381</a></p> <p>The gestures that can be determined by the Accused Instrumentalities also include the gestures associated with, for example, the third-party application GoCam by Crunchfish, which is available on Apple's App Store. This application enables users to capture photos using hand gestures. This application requires iOS 8.0 or later. <a href="https://apps.apple.com/us/app/gocam-by-crunchfish/id883157865">https://apps.apple.com/us/app/gocam-by-crunchfish/id883157865</a>. The iPhone 6 released with iOS 8. <a href="https://en.wikipedia.org/wiki/IPhone_6">https://en.wikipedia.org/wiki/IPhone_6</a>. The GoCam app launched on July 3, 2014. <a href="https://apptopia.com/ios/app/883157865/about">https://apptopia.com/ios/app/883157865/about</a>.</p>



**Exhibit A – U.S. Patent 8,878,949**  
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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use		
	<p>Capture photos from a distance with gestures</p> 	<p>Quickly capture a photo with a v-sign gesture</p> 	<p>Conveniently share or delete latest photo</p> 

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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<p>GoCam by Crunchfish lets you capture and browse photos from a distance with hand gestures.</p> <p>This is how it's done:</p> <ul style="list-style-type: none"> <li>- The built in camera on your iPhone or iPad detects your gestures</li> <li>- Centre your hand at least 30 cm from the camera on your device</li> <li>- A slight wave of your hand helps GoCam detect you, especially in dim lighting</li> <li>- Use touchless at up to three meters</li> </ul> <p>PHOTO &amp; VIDEO</p> <ul style="list-style-type: none"> <li>- Do a "Grab" gesture to capture photos or videos together with your friends</li> <li>- Do a "V-sign" gesture for a quick snap</li> <li>- You can also use touch to take photos using the hand icon</li> </ul> <p>GALLERY</p> <ul style="list-style-type: none"> <li>- Browse through your photos with a swipe gesture</li> <li>- Show a thumbs up gesture to mark photo as favorite</li> </ul> <p>ALLOW GOCAM TO</p> <ul style="list-style-type: none"> <li>- Access the camera - to take photos and control your device with gestures</li> <li>- Access your photos - to save and share photos with GoCam users in the gallery</li> </ul> <p>FEEDBACK</p> <ul style="list-style-type: none"> <li>- Say Hi on <a href="mailto:gocam@crunchfish.com">gocam@crunchfish.com</a> and tell us about your GoCam experience!</li> </ul> <p>GoCam is recommended for iPhone 5 and up, iPad 4 and up, iPad mini and up.</p> <p>See, e.g., <a href="https://apps.apple.com/us/app/gocam-by-crunchfish/id883157865">https://apps.apple.com/us/app/gocam-by-crunchfish/id883157865</a></p> <p>The gestures that can be determined by the Accused Instrumentalities also include the gestures associated with the third-party application MOMAX cam by Crunchfish, which is available on Apple's App Store. This application enables users to capture photos using hand gestures. MOMAX cam requires iOS 8.0 or later and is recommended for iPhone 5 and later. MOMAX cam launched on May 28, 2015. <a href="https://apps.apple.com/us/app/gocam-by-crunchfish/id883157865">https://apps.apple.com/us/app/gocam-by-crunchfish/id883157865</a>.</p>

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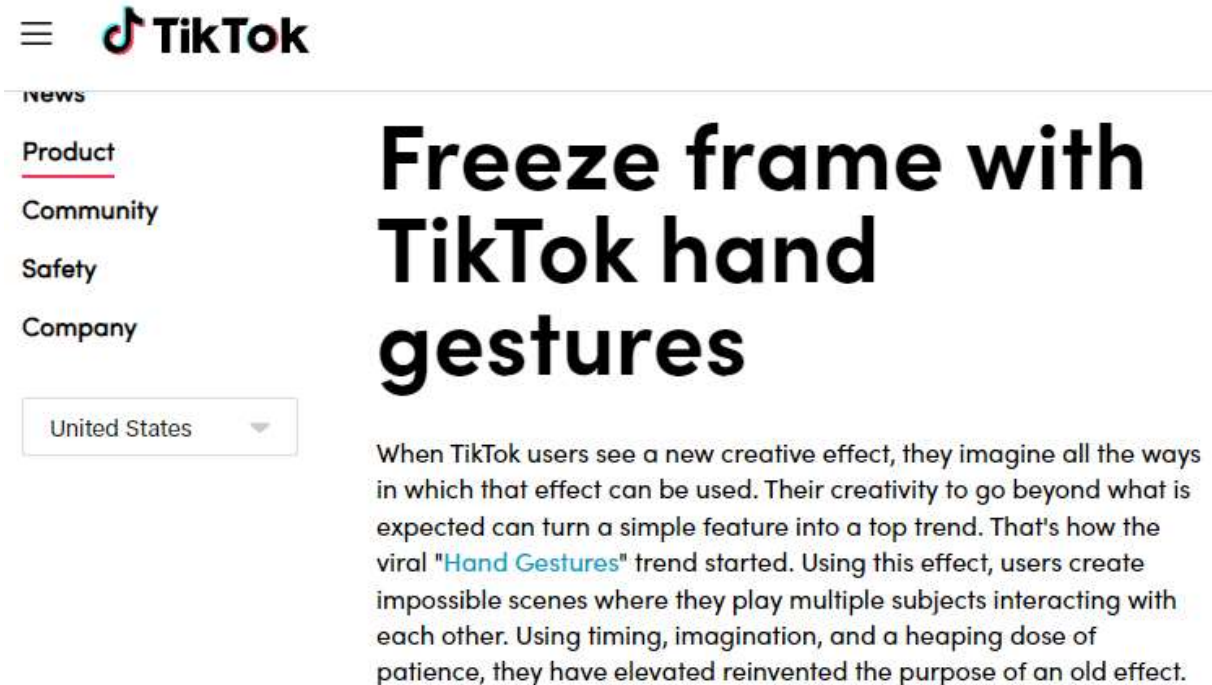


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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<p>Congratulations! Download MOMAX cam now to start capturing great photos with your MOMAX SelfiFit Pod.</p> <p>You have multiple ways to capture photos and shoot videos with MOMAX cam.</p> <ol style="list-style-type: none"> <li>1. Use it like your iPhone camera with the touch button</li> <li>2. Use the bluetooth trigger that comes with your MOMAX SelfiFit Pod</li> <li>3. Use Crunchfish innovative gesture technology to remotely trigger camera from up to 3m.</li> </ol> <p>This is how to use gesture control:</p> <p>Raise your hand - make sure it's visible on the screen - when you get a blue sign, close your hand to trigger the camera</p> <p>Make a thumbs-up to like photos in your photo gallery</p> <p>V-sign gesture to instantly capture a photo available as an in-app purchase.</p> <p>MOMAX cam requires iOS8 and is recommended for iPhone 5 and later.  Gesture technology designed with love by CRUNCHFISH.</p> <p>See, e.g., <a href="https://apps.apple.com/us/app/momax-cam/id983544743">https://apps.apple.com/us/app/momax-cam/id983544743</a></p> <p>Additional third-party applications that use the Accused Instrumentalities to determine gestures includes the TikTok Application that uses the freeze frame feature:</p>

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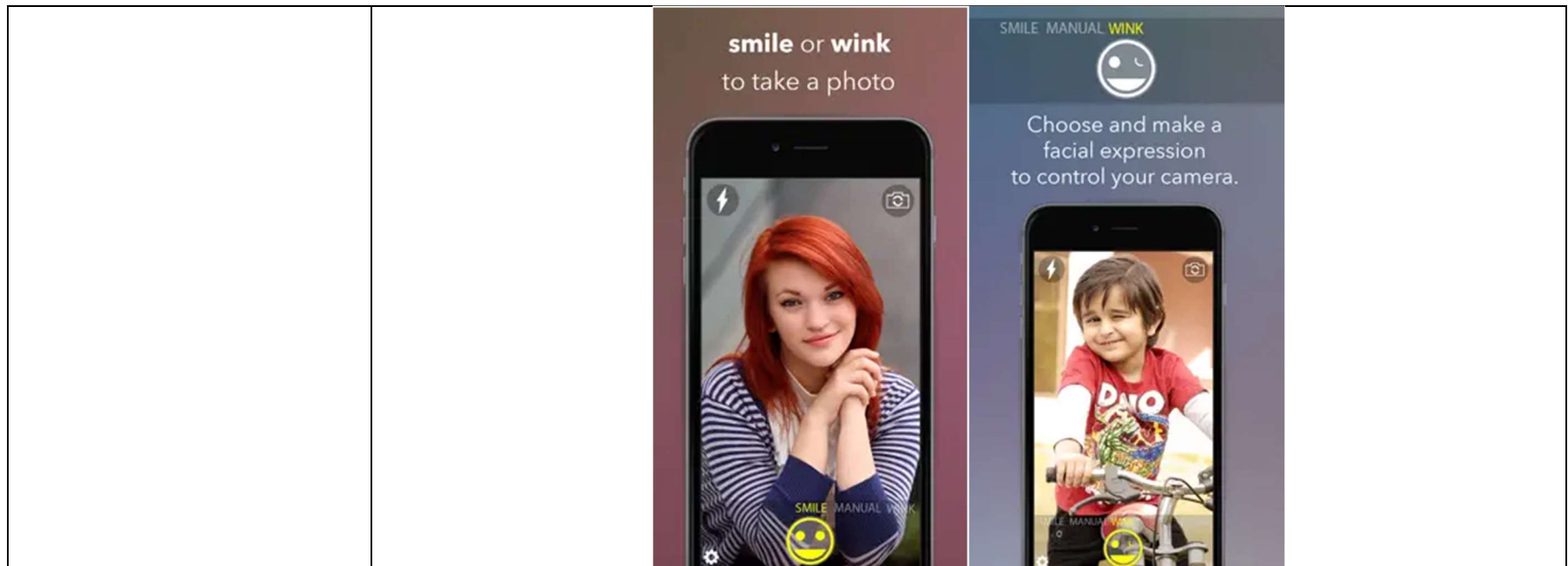
U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	 <p>The screenshot shows the TikTok website's 'news' section. The left sidebar contains links for 'news', 'Product' (highlighted with a red underline), 'Community', 'Safety', and 'Company'. Below these links is a dropdown menu set to 'United States'. The main content area features a large heading 'Freeze frame with TikTok hand gestures' and a paragraph of text: 'When TikTok users see a new creative effect, they imagine all the ways in which that effect can be used. Their creativity to go beyond what is expected can turn a simple feature into a top trend. That's how the viral "Hand Gestures" trend started. Using this effect, users create impossible scenes where they play multiple subjects interacting with each other. Using timing, imagination, and a heaping dose of patience, they have elevated reinvented the purpose of an old effect.'</p>

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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	 <p>See, e.g., <a href="https://newsroom.tiktok.com/en-us/freeze-frame-with-tiktok-hand-gestures">https://newsroom.tiktok.com/en-us/freeze-frame-with-tiktok-hand-gestures</a>:</p> <p>The gestures that can be determined by the Accused Instrumentalities also include the gestures associated with the third-party application FaceCam by Prithiv Dev Devendran, which is available on Apple's App Store. This application enables users to capture photos using face gestures. FaceCam requires iOS 8.0 or later. FaceCam launched on September 11, 2014. See <a href="https://apps.apple.com/us/app/facecam-take-hands-free-photos-and-selfies/id908027969">https://apps.apple.com/us/app/facecam-take-hands-free-photos-and-selfies/id908027969</a>.</p>



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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<p>Control the camera using your face.  With FaceCam simply smile or wink to take amazing photos and selfies without even using your hands.It's a intelligent camera that can read your face.</p> <p>Ever wanted to control the camera using your face?  Ever wanted to take pictures without using your hands?  Ever wanted a camera that can read your face expressions?  Now you can with FaceCam,it's a fun and new way to take photos and selfies.</p> <p>FaceCam uses iOS's face detection technology to recognise facial expressions that you make in real time.This feature allows it to know when the person wants to take a photo.  You can use FaceCam at a great distance,just select a expression and place the device at your desired position and distance then make the expression,FaceCam will intelligently read your face and take that as a command to take a photo.It's pretty awesome.</p> <p>FaceCam also comes along with a great photo editor,so that you can trim your photos with beautiful filters,frames and adjust them.It can also share your photos to Twitter,Facebook and best of all it can send the photo to Instagram.</p> <p>INSTRUCTIONS:  -Choose any facial expression by swiping left or right,and FaceCam will start reading your face for that specific expression.</p> <p>-Place the device at any position and distance(not too far) you want.</p> <p>-Make the expression,for example if you chose wink just wink at the camera and a three second timer to take a photo will start.It's that easy.</p> <p><a href="https://apps.apple.com/us/app/facecam-take-hands-free-photos-and-selfies/id908027969">https://apps.apple.com/us/app/facecam-take-hands-free-photos-and-selfies/id908027969</a></p>



**Exhibit A – U.S. Patent 8,878,949**  
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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<p>The gestures that can be determined by the Accused Instrumentalities further include the gestures associated with <b>Face ID</b>, which, for example, unlocks a user's phone when it detects the user's face. More specifically, when performing the Face ID functionality, the processing unit within the device housing of the Accused Instrumentalities determines that a gesture has been performed in the electro-optical sensor field of view based on the electro-optical sensor output in multiple ways, where each way is a separate and distinct infringement.</p> <p>As a first example, the screen-side visible light camera (which, in this example, functions as the electro-optical sensor of claim 1) provides an electro-optical sensor output to the processing unit, which confirms the presence of a face based on the output of the screen-side visible-light camera, and also confirms that a gesture has been performed by the face in the screen-side visible-light camera's field of view by determining that the eyes of the face are open and the face's attention is directed towards the device:</p> <ul style="list-style-type: none"> <li>● We turn our attention to the top of the phone to find the much anticipated <a href="#">mini Kinect</a> TrueDepth camera system! This system rallies a team of sensors to bring facial recognition to the X.</li> <li>● Step one in this system: the flood illuminator embedded in the display blasts your face with infrared (IR) light.</li> <li>● Next, the front-facing camera, marked in red, confirms the presence of a face.</li> <li>● Then the IR dot projector, far right, projects a grid of dots over your face to <a href="#">create a three-dimensional map</a>.</li> <li>● Finally, the IR camera on the left reads this map, and sends the data to the phone.</li> </ul> <p>See <a href="https://www.ifixit.com/Teardown/iPhone+X+Teardown/98975">https://www.ifixit.com/Teardown/iPhone+X+Teardown/98975</a></p>

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	<p>“With a simple glance, Face ID securely unlocks your iPhone or iPad Pro. ... Face ID requires that the TrueDepth camera sees your face or your eyes, whether your device is lying on a surface or you're holding it in a natural position. ... Face ID recognizes if your eyes are open and your attention is directed towards the device.” <a href="https://support.apple.com/en-us/102381">https://support.apple.com/en-us/102381</a></p> <p>After the processing unit confirms that a gesture has been performed by the face in the screen-side visible-light camera’s field of view, then the processing unit controls the IR camera of the True Depth camera system (which, in this example, functions as the digital camera of claim 1) in response to the gesture performed in the electro-optical sensor field of view. Specifically, the IR camera captures an infrared image of the face: “The TrueDepth camera captures accurate face data by projecting and analyzing thousands of invisible dots to create a depth map of your face and also captures an infrared image of your face.” <a href="https://support.apple.com/en-us/102381">https://support.apple.com/en-us/102381</a>.</p> <p>With Face ID, the eyes of the face being open and the face’s attention being directed towards the device corresponds to an image capture command. Such an image capture command causes the digital camera to store an image to memory. “Each time you unlock your device, the TrueDepth camera recognizes you by capturing accurate depth data and an infrared image” <a href="https://support.apple.com/en-us/102381">https://support.apple.com/en-us/102381</a></p> <p>In addition, during initial setup of FaceID, and throughout the usage of Face ID, FaceID stores an image of the face to memory in response to the image capture command: “During initial setup, the user's face is scanned twice from a number of angles to create a complete reference map. As the system is used, it learns about typical variations in a user's appearance, and will adjust its registered face data to match aging, facial hair growth, and other changes using the Neural Engine.” <a href="https://en.wikipedia.org/wiki/Face_ID">https://en.wikipedia.org/wiki/Face_ID</a></p> <p>As a second example, the electro-optical sensor is a part of a camera module housing (e.g., True Depth camera), and is separate from the digital camera that is also part of the camera module housing. The True Depth camera contains a CMOS electro-optical sensing array that is used to electro-optically monitor the camera’s field of view. The CMOS electro-optical sensing array contains an electro-optical sensor that captures the image used to detect the gesture (e.g., the eyes of the face being open and the face’s attention being directed towards the device). The electro-optical sensor and the digital camera are both part of the same True Depth camera module housing, with the electro-optical sensor and the digital camera as separate components both in the same device housing.</p>

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	<p>The CMOS electro-optical sensing array provides an electro-optical sensor output to the processing unit, which confirms that a gesture has been performed by the face in the CMOS electro-optical sensing array's field of view, by determining that the eyes of the face are open and the face's attention is directed towards the device. After the processing unit confirms that a gesture has been performed by the face in the CMOS electro-optical sensing array's field of view, then the processing unit controls the digital camera in response to the gesture performed in the CMOS electro-optical sensing array's field of view. Specifically, the digital camera of the True Depth camera housing captures an infrared image of the face. With Face ID, the eyes of the face being open and the face's attention being directed towards the device corresponds to an image capture command. Such an image capture command causes the digital camera to store an image to memory. In addition, during initial setup of FaceID, and throughout the usage of Face ID, FaceID stores an image of the face to memory in response to the image capture command. See <a href="https://en.wikipedia.org/wiki/Face_ID">https://en.wikipedia.org/wiki/Face_ID</a></p> <p>Similarly, <b>Animojis/Memojis</b> are created in response to a gesture as Face ID sensors are used to “map your face and capture your expressions to animate the Animoji.” <a href="https://www.lifewire.com/animoji-4153078">https://www.lifewire.com/animoji-4153078</a>. “Face ID is a facial recognition system designed and developed by Apple Inc. for the iPhone and iPad Pro. The system allows biometric authentication for ... providing detailed facial expression tracking for Animoji, as well as six degrees of freedom (6DOF) head-tracking, eye-tracking, and other features. ... Face ID can be used without authentication to track over 50 aspects of a user's facial expression and positioning, which can be used to create live effects such as Animoji or camera filters. <a href="https://en.wikipedia.org/wiki/Face_ID">https://en.wikipedia.org/wiki/Face_ID</a> “Animoji leverages the TrueDepth camera system used for Face ID, as well as the chip inside a compatible iPhone, to capture and analyse more than 50 different muscle movements in your face. It then mirrors your expressions in different emoji to produce Animoji so we suppose they could be called a Face ID emoji.” <a href="https://www.pocket-lint.com/what-are-animoji-how-to-create-use-apples-animated-emoji/">https://www.pocket-lint.com/what-are-animoji-how-to-create-use-apples-animated-emoji/</a></p> <p>More specifically, when performing the Animojis/Memojis functionality, the processing unit within the device housing of the Accused Instrumentalities determines that a gesture has been performed in the electro-optical sensor field of view based on the electro-optical sensor output in multiple ways, where each way is separate and distinct infringement:</p>

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	<p>As a first example, the screen-side visible light camera (which, in this example, functions as the electro-optical sensor of claim 1) provides an electro-optical sensor output to the processing unit, which confirms the presence of a face based on the output of the screen-side visible-light camera, and also confirms that a gesture has been performed by the face in the screen-side visible-light camera's field of view by determining that at least one of the over 50 aspects of a user's facial expression and positioning has changed. After the processing unit confirms that a gesture has been performed by the face in the screen-side visible-light camera's field of view, then the processing unit controls the IR camera (which, in this example, functions as the digital camera of claim 1) in response to the gesture performed in the electro-optical sensor field of view. Specifically, the IR camera captures an infrared image of the face. With Animojis/Memojis, a change in at least one of the over 50 aspects of a user's facial expression and positioning corresponds to an image capture command. Such an image capture command causes the IR camera to store an image to memory, which corresponds to the next frame of the animated Animojis/Memojis.</p> <p>As a second example, the electro-optical sensor is a part of a camera module housing (e.g., True Depth camera), and is separate from the digital camera that is also part of the camera module housing. The True Depth camera contains a CMOS electro-optical sensing array that is used to electro-optically monitor the camera's field of view. The CMOS electro-optical sensing array contains an electro-optical sensor that captures the image used to detect the gesture (e.g., a change in at least one of the over 50 aspects of a user's facial expression and positioning). The electro-optical sensor and the digital camera are both part of the same True Depth camera module housing, with the electro-optical sensor and the digital camera as separate components both in the same device housing.</p> <p>The CMOS electro-optical sensing array provides an electro-optical sensor output to the processing unit, which confirms that a gesture has been performed by the face in the CMOS electro-optical sensing array's field of view, by determining a change in at least one of the over 50 aspects of a user's facial expression and positioning. After the processing unit confirms that a gesture has been performed by the face in the CMOS electro-optical sensing array's field of view, then the processing unit controls the digital camera in response to the gesture performed in the CMOS electro-optical sensing array's field of view. Specifically, the digital camera of the True-Depth camera housing captures an infrared image of the face. With Animojis/Memojis, a change in at least one of the over 50 aspects of a user's facial expression and positioning corresponds to an image capture command. Such an image capture command causes the IR</p>

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	<p>camera to store an image to memory, which corresponds to the next frame of the animated Animojis/Memojis.</p> <p>The gestures that can be determined by the Accused Instrumentalities further include the gestures associated with <b>3<sup>rd</sup> party applications</b>, which capture photographs in response to a gesture performed in the electro-optical sensor field of view. More specifically, when a third-party application performs the capture photograph functionality, the processing unit within the device housing of the Accused Instrumentalities determines that a gesture has been performed in the electro-optical sensor field of view based on the electro-optical sensor output in multiple ways, where each way is a separate and distinct infringement.</p> <p>As a first example, the Proximity Sensor, Ambient Light Sensor, Backside Illumination Sensor, True Depth camera, infrared camera, or one of the other visible-light cameras not used to store an image to memory (which, in this example, functions as the electro-optical sensor of claim 1) provides an electro-optical sensor output to the processing unit, which confirms the presence of a gesture (e.g., facial-gesture or hand-gesture) based on the output of the electro-optical sensor. After the processing unit confirms that a gesture has been performed by the electro-optical sensor's field of view, then the processing unit controls the visible-light camera (e.g., Screen-side visible light camera, Wide Angle camera, Ultra-wide camera, or Telephoto camera, which, in this example, functions as the digital camera of claim 1) (see, e.g., <a href="https://developer.apple.com/documentation/avfoundation/avcapturedevice/devicetype">https://developer.apple.com/documentation/avfoundation/avcapturedevice/devicetype</a>) in response to the gesture performed in the electro-optical sensor field of view. Specifically, the visible light camera captures an image of the face. With 3<sup>rd</sup> party applications, a gesture (e.g., facial-gesture or hand-gesture) corresponds to an image capture command. Such an image capture command causes the visible-light camera to store an image to memory.</p> <p>As a second example, the electro-optical sensor is a part of a camera module housing (e.g., Screen-side visible light camera, Wide Angle camera, Ultra-wide camera, Telephoto camera), and is separate from the digital camera that is also part of the camera module housing. The camera modules (e.g., Screen-side visible light camera, Wide Angle camera, Ultra-wide camera, Telephoto camera) each contain a CMOS electro-optical sensing array that is used to electro-optically monitor the camera's field of view. Each visible-light camera contains an electro-optical sensor that captures the image used to detect the gesture (e.g., , facial-gesture or hand-gesture). The electro-optical sensor and the digital camera are both part of</p>

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	<p>the same camera module housing, with the electro-optical sensor and the digital camera as separate components both in the same device housing.</p> <p>The CMOS electro-optical sensing array provides an electro-optical sensor output to the processing unit, which confirms that a gesture has been performed by the face in the CMOS electro-optical sensing array's field of view. After the processing unit confirms that a gesture has been performed (e.g., by a hand or by the face) in the CMOS electro-optical sensing array's field of view, then the processing unit controls the digital camera in response to the gesture performed in the CMOS electro-optical sensing array's field of view. Specifically, the digital camera of the camera module housing captures an image of the face. With 3<sup>rd</sup> party applications, a gesture (e.g., facial-gesture or hand-gesture) corresponds to an image capture command. Such an image capture command causes the visible-light camera to store an image to memory.</p> <p>This limitation may also be informed by source code, and GTP reserves the right to assert additional theories under the doctrine of equivalents in response to claim construction positions that Apple may adopt or the production of source code for software-based limitations. <i>See</i> L.P.R. 3.6.</p> <p><b><u>Indirect Infringement</u></b></p> <p>GTP also contends that Apple indirectly infringes claim 4 of the '949 Patent because Apple's users, customers, and business partners were provided the Accused Instrumentalities by Apple during at least some time periods within February 4, 2015 to May 11, 2020. Apple actively encouraged and instructed these users, customers, and business partners to use the Accused Instrumentalities in ways that directly infringe claim 4 of the '949 Patent. Examples include Apple's online instructions on its website and app store for the Accused Instrumentalities, including instructions regarding the use of Apple's Face ID and Apple's Memojis, and Animojis (<i>see, e.g., <a href="https://support.apple.com/en-us/HT208986">https://support.apple.com/en-us/HT208986</a> and <a href="https://support.apple.com/en-us/HT208109">https://support.apple.com/en-us/HT208109</a></i>), as well as information Apple provided to its business partners both publicly on its websites and privately regarding APIs that are configured for recognizing gestures. Apple specifically intended and induced its users, customers, and business partners to use the portable device of at least claim 4 of the '949 Patent through the normal and customary use of the Accused Instrumentalities by the users, customers, and/or business partners.</p> <p>With regard to third-party applications (e.g., TikTok Application, GoCam by Crunchfish, MOMAX cam by Crunchfish), Apple further induced the making and using of the accused systems by Apple's users,</p>



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	<p>customers, and business partners (to whom Apple provides the third-party applications through Apple’s App Store) in order for the users, customers, and business partners to install and use one or more of the 3<sup>rd</sup> party applications on the Accused Instrumentalities. For Apple’s inducement with respect to 3<sup>rd</sup> party applications, the direct infringer is Apple’s users, customers, or business partners.</p> <p>Apple also indirectly infringes through contributory infringement by providing or having provided third-party applications (e.g., TikTok Application, GoCam by Crunchfish, MOMAX cam by Crunchfish), or providing or having provided specific software components that are part of the third-party applications, that are not a staple article of commerce and have no substantial non-infringing use, in order to be combined by Apple’s users, customers, and business partners with the other claimed elements (e.g., Accused Instrumentalities) so as to assemble and make the claimed portable device. The third-party applications are components since software may be a “component” under section 271(c). <i>See, e.g., Robocast, Inc., v. Microsoft Corp.</i>, 21 F.Supp.3d 320, 331-32 (D. Del. 2014); <i>i4i Ltd. Partnership v. Microsoft Corp.</i>, 670 F. Supp. 2d 568, 580 (E.D. Tex. 2009), <i>aff’d</i>, 598 F.3d 831, 849 (Fed. Cir. 2010). The specific software components of the 3<sup>rd</sup> party applications are also components, since software programs may be made up of smaller software units, each of which may also be a “component” under the statute. <i>See Lucent Techs., Inc. v. Gateway, Inc.</i>, 580 F.3d 1301, 1320 (Fed. Cir. 2009) (concluding that proper “component” for contributory infringement analysis was the date picker feature in Microsoft Outlook, not Microsoft Outlook as a whole). In addition, “an infringer ‘should not be permitted to escape liability as a contributory infringer merely by embedding [the infringing apparatus] in a larger product with some additional, separable feature before importing and selling it.’” <i>Id.</i> (quoting <i>Ricoh Co. v. Quanta Computer Inc.</i>, 550 F.3d 1325, 1337 (Fed. Cir. 2008)). For Apple’s contributory infringement with respect to 3<sup>rd</sup> party applications, the direct infringer is Apple’s users, customers, or business partners.</p> <p>GTP also contends that Apple infringes claim 4 of the ’949 Patent under 35 U.S.C §271(f)(1), by supplying or causing to be supplied in or from the United States (during at least some time periods within February 4, 2015 to May 11, 2020) all or a substantial portion of the components of a claim 4 of the ’949 Patent, where such components are uncombined in whole or in part, in such manner as to actively induce the combination of such components outside of the United States in a manner that would infringe the patent if such combination occurred within the United States. First, Apple supplies, or causes to be supplied, the foregoing equipment (e.g., Accused Instrumentalities) to Apple’s users, customers, or business partners outside the United States. In addition, Apple operates data centers in the United States where updates to Apple’s iOS operating system as well as third-party applications (e.g., TikTok Application, GoCam by</p>

**Exhibit A – U.S. Patent 8,878,949**  
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	<p>Crunchfish, MOMAX cam by Crunchfish) are supplied to Apple’s users, customers, or business partners outside the United States. For example, under information and belief, in the United States Apple operates at least five data centers in or near the cities of Reno, Nevada; Maiden, North Carolina; Mesa, Arizona; Prineville, Oregon; and Newark, California. See <a href="https://dgtlinfra.com/apple-data-center-locations/">https://dgtlinfra.com/apple-data-center-locations/</a>. Under information and belief, Apple’s United States based data centers provide Apple’s iOS operating system as well as third-party applications to Apple’s users, customers, or business partners outside the United States through Apple’s App Store and Apple’s operating system update processes. The Accused Instrumentalities, Apple’s iOS operating system, and the third-party applications are each components that are uncombined in whole or in part, where the combination of such components outside of the United States would infringe claim 4 of the ’949 Patent if such combination occurred within the United States. Unlike <i>Microsoft Corp. v. AT&amp;T Corp.</i>, the copy of the iOS operating system, or third-party application, that Apple’s users, customers, or business partners download from Apple’s servers is what is installed in the Accused Instrumentality. See <i>Microsoft Corp. v. AT&amp;T Corp.</i>, 550 U.S. 437, 442 (2007) (“The master disk or electronic transmission Microsoft sends from the United States is never installed on any of the foreign-made computers in question. Instead, copies made abroad are used for installation. Because Microsoft does not export from the United States the copies actually installed, it does not ‘suppl[y] ... from the United States’ ‘components’ of the relevant computers, and therefore is not liable under § 271(f) as currently written.”). In addition, unlike <i>Life Technologies Corp. v. Promega Corp.</i>, Apple supplies the Accused Instrumentality, the iOS operating system, and the third-party applications and APIs to Apple’s users, customers, or business partners outside the United States. See <i>Life Technologies Corp. v. Promega Corp.</i>, 137 S. Ct. 734, 743 (2017) (a “substantial portion of the components of a patented invention” in Section 271(f)(1) had “a quantitative, not a qualitative meaning” and did “not cover the supply of a single component of a multicomponent invention.”). Here, Apple supplies the Accused Instrumentality, the iOS operating system, and the third-party applications to Apple’s users, customers, or business partners outside the United States. Even if Apple does not supply or cause to be supplied the foregoing equipment (e.g., Accused Instrumentality) in or from the United States, Apple still provides the iOS operating system, and the third-party applications to Apple’s users, customers, or business partners outside the United States, which subjects Apple to liability under 35 U.S.C 271(f)(1).</p> <p>GTP also contends that Apple infringes claim 4 of the ’949 Patent under 35 U.S.C §271(f)(2), by supplying or causing to be supplied in or from the United States (during at least some time periods within February 4, 2015 to May 11, 2020) the third-party applications (e.g., TikTok Application, GoCam by Crunchfish, MOMAX cam by Crunchfish) that are especially made or especially adapted for use in the invention of</p>



**Exhibit A – U.S. Patent 8,878,949**  
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	<p>claim 4 of the '949 Patent, and are not a staple article or commodity of commerce suitable for substantial noninfringing use, where the third-party applications are uncombined in whole or in part, knowing that the third-party applications are so made or adapted and intending that such component will be combined outside of the United States in a manner that would infringe the patent if such combination occurred within the United States. Apple operates data centers in the United States where third-party applications (e.g., TikTok Application, GoCam by Crunchfish, MOMAX cam by Crunchfish) are supplied to Apple's users, customers, or business partners outside the United States. For example, under information and belief, in the United States Apple operates at least five data centers in or near the cities of Reno, Nevada; Maiden, North Carolina; Mesa, Arizona; Prineville, Oregon; and Newark, California. <i>See</i> <a href="https://dgtlinfra.com/apple-data-center-locations/">https://dgtlinfra.com/apple-data-center-locations/</a>. Under information and belief, Apple's United States based data centers provide third-party applications to Apple's users, customers, or business partners outside the United States through Apple's App Store and Apple's operating system update processes. The third-party applications are each a component of the invention of claim 4 of the '949 Patent that is especially made or especially adapted for use in the invention, and not a staple article or commodity of commerce suitable for substantial noninfringing use. Unlike <i>Microsoft Corp. v. AT&amp;T Corp.</i>, the third-party applications that Apple's users, customers, or business partners download from Apple's servers is what is installed in the Accused Instrumentality. <i>See Microsoft Corp. v. AT&amp;T Corp.</i>, 550 U.S. 437, 442 (2007) ("The master disk or electronic transmission Microsoft sends from the United States is never installed on any of the foreign-made computers in question. Instead, copies made abroad are used for installation. Because Microsoft does not export from the United States the copies actually installed, it does not 'suppl[y] ... from the United States' 'components' of the relevant computers, and therefore is not liable under § 271(f) as currently written.").</p> <p>GTP also contends that Apple infringes claim 4 of the '949 Patent under 35 U.S.C §271(f)(2), by supplying or causing to be supplied in or from the United States (during at least some time periods within February 4, 2015 to May 11, 2020) the Face ID and Memojis/Animojis software components of the iOS operating system or APIs that are configured for recognizing gestures, that are especially made or especially adapted for use in the invention of claim 4 of the '949 Patent, and are not a staple article or commodity of commerce suitable for substantial noninfringing use, where iOS operating system containing the Face ID and Memojis/Animojis components or APIs that are configured for recognizing gestures are uncombined in whole or in part, knowing that the Face ID and Memojis/Animojis components or APIs that are configured for recognizing gestures of the iOS operating system are so made or adapted, and intending that the iOS operating system containing such components will be combined outside of the United States in a manner</p>

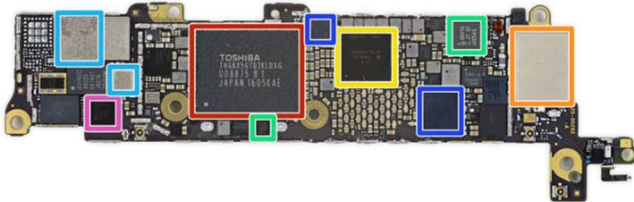
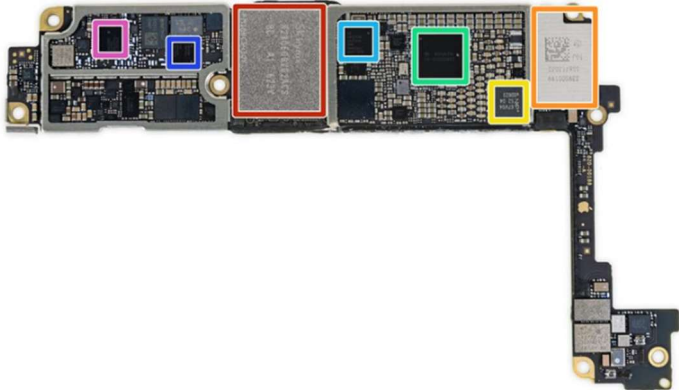
**Exhibit A – U.S. Patent 8,878,949**  
**Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR**

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<p>that would infringe the patent if such combination occurred within the United States. The specific software components of the iOS operating system are also components, since software programs may be made up of smaller software units, each of which may also be a “component” under the statute. <i>See Lucent Techs., Inc. v. Gateway, Inc.</i>, 580 F.3d 1301, 1320 (Fed. Cir. 2009) (concluding that proper “component” for contributory infringement analysis was the date picker feature in Microsoft Outlook, not Microsoft Outlook as a whole). Apple operates data centers in the United States where the iOS operating system containing the Face ID and Memojis/Animojis components or APIs that are configured for recognizing gestures are supplied to Apple’s users, customers, or business partners outside the United States. For example, under information and belief, in the United States Apple operates at least five data centers in or near the cities of Reno, Nevada; Maiden, North Carolina; Mesa, Arizona; Prineville, Oregon; and Newark, California. <i>See</i> <a href="https://dgtlinfra.com/apple-data-center-locations/">https://dgtlinfra.com/apple-data-center-locations/</a>. Under information and belief, Apple’s United States based data centers provide the iOS operating system containing the Face ID and Memojis/Animojis components to Apple’s users, customers, or business partners outside the United States through Apple’s operating system update processes. The Face ID and Memojis/Animojis components or APIs that are configured for recognizing gestures are each a component of the invention of claim 4 of the ’949 Patent that is especially made or especially adapted for use in the invention, and not a staple article or commodity of commerce suitable for substantial noninfringing use. Unlike <i>Microsoft Corp. v. AT&amp;T Corp.</i>, the iOS operating system (containing the Face ID and Memojis/Animojis components) that Apple’s users, customers, or business partners download from Apple’s servers is what is installed in the Accused Instrumentality. <i>See Microsoft Corp. v. AT&amp;T Corp.</i>, 550 U.S. 437, 442 (2007) (“The master disk or electronic transmission Microsoft sends from the United States is never installed on any of the foreign-made computers in question. Instead, copies made abroad are used for installation. Because Microsoft does not export from the United States the copies actually installed, it does not ‘suppl[y] ... from the United States’ ‘components’ of the relevant computers, and therefore is not liable under § 271(f) as currently written.”).</p> <p>Apple iPhone 6s memory:</p>

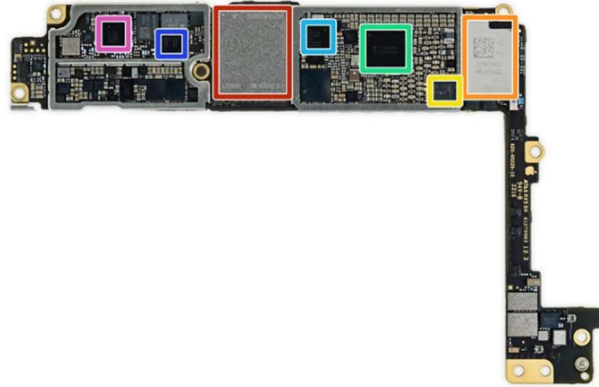
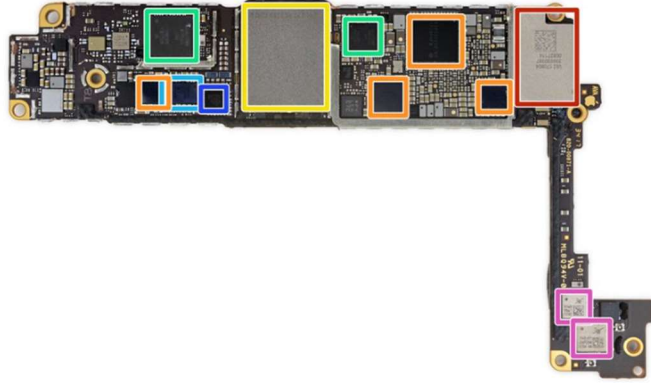
**Exhibit A – U.S. Patent 8,878,949**  
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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<div data-bbox="667 354 1377 776"> </div> <ul style="list-style-type: none"> <li>● Toshiba THGBX5G7D2KLFXG 16 GB 19 nm NAND Flash</li> <li>● Universal Scientific Industrial 339S00043 Wi-Fi Module</li> <li>● NXP 66V10 NFC Controller (vs. 65V10 found in iPhone 6)</li> <li>● Apple/Dialog 338S00120 Power Management IC</li> <li>● Apple/Cirrus Logic 338S00105 Audio IC</li> <li>● Qualcomm PMD9635 Power Management IC</li> <li>● Skyworks SKY77357 Power Amplifier Module (likely an iteration of the SKY77354)</li> </ul> <p>“Toshiba THGBX5G7D2KLFXG 16 GB 19 nm NAND Flash”  See <a href="https://www.ifixit.com/Teardown/iPhone+6s+Teardown/48170">https://www.ifixit.com/Teardown/iPhone+6s+Teardown/48170</a>  Apple iPhone 6s Plus memory:</p> <div data-bbox="667 963 1377 1409"> </div> <ul style="list-style-type: none"> <li>● SK Hynix H23QDG8UD1ACS 16 GB NAND Flash</li> <li>● Universal Scientific Industrial 339S00043 Wi-Fi Module</li> <li>● NXP 66V10 NFC Controller (vs. 65V10 found in iPhone 6)</li> <li>● Apple/Dialog 338S00122 Power Management IC</li> <li>● Apple/Cirrus Logic 338S00105 Audio IC</li> <li>● Qualcomm PMD9635 Power Management IC</li> <li>● Skyworks SKY77357 Power Amplifier Module (likely an iteration of the SKY77354)</li> </ul> <p>“SK Hynix H23QDG8UD1ACS 16 GB NAND Flash”</p>

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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<p>See <a href="https://www.ifixit.com/Teardown/iPhone+6s+Plus+Teardown/48171">https://www.ifixit.com/Teardown/iPhone+6s+Plus+Teardown/48171</a></p> <p>Apple iPhone SE memory:</p>  <ul style="list-style-type: none"> <li>● Toshiba THGBX5G7D2KLDXG 16 GB NAND Flash</li> <li>● 339S00134 (likely an iteration of the Universal Scientific Industrial 339S00043 Wi-Fi module)</li> <li>● Apple/Dialog 338S00170 Power Management IC</li> <li>● NXP 66V10 NFC Controller and 1610A3 Charging IC (as seen in iPhone 6s/6s Plus)</li> <li>● Skyworks SKY77826 Ultra low-band Power Amplifier Duplexer and SKY77357 2G/EDGE Power Amplifier Module (likely an iteration of SKY77336)</li> </ul> <p>See <a href="https://www.ifixit.com/Teardown/iPhone+SE+Teardown/60902">https://www.ifixit.com/Teardown/iPhone+SE+Teardown/60902</a></p> <p>Apple iPhone 7 memory:</p>  <ul style="list-style-type: none"> <li>● SK Hynix H23QEG8VG2ACS 32 GB Flash</li> <li>● Murata 339S00199 Wi-Fi/Bluetooth Module</li> <li>● NXP PN67V NFC Controller w/ Secure Element</li> <li>● Apple/Dialog Semiconductor 338S00225 Power Management IC</li> <li>● Qualcomm PMD9645 Power Management IC</li> <li>● Qualcomm WTR4905 Multimode LTE Transceiver</li> <li>● Qualcomm WTR3925 RF Transceiver</li> </ul> <p>See <a href="https://www.ifixit.com/Teardown/iPhone+7+Teardown/67382">https://www.ifixit.com/Teardown/iPhone+7+Teardown/67382</a></p> <p>Apple iPhone 7 Plus memory:</p>

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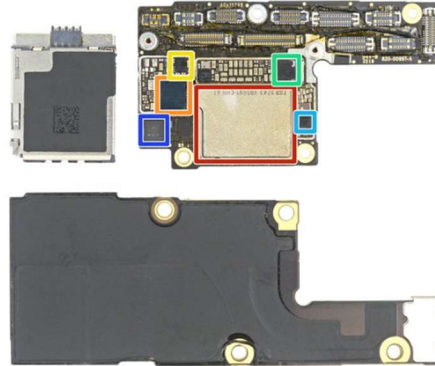

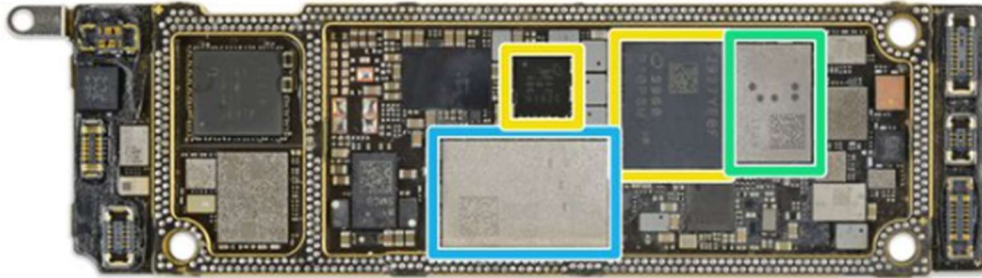
U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<div data-bbox="751 315 1346 699">  </div> <div data-bbox="1409 277 1854 662"> <ul style="list-style-type: none"> <li>● Toshiba THGBX6T0T8LLFXF 128 GB NAND Flash</li> <li>● Murata 339S00199 Wi-Fi/Bluetooth Module</li> <li>● NXP PN67V NFC Controller</li> <li>● Dialog 338S00225 Power Management IC</li> <li>● Qualcomm PMD9645 Power Management IC</li> <li>● Qualcomm WTR4905 Multimode LTE Transceiver</li> <li>● Qualcomm WTR3925 RF Transceiver</li> </ul> </div> <p data-bbox="617 704 1541 737">See <a href="https://www.ifixit.com/Teardown/iPhone+7+Plus+Teardown/67384">https://www.ifixit.com/Teardown/iPhone+7+Plus+Teardown/67384</a></p> <p data-bbox="617 742 942 774">Apple iPhone 8 memory:</p> <div data-bbox="726 786 1373 1166">  </div> <div data-bbox="1398 773 1862 1261"> <ul style="list-style-type: none"> <li>● And on the back side: <ul style="list-style-type: none"> <li>● Apple/USI 170804 339S00397 WiFi/Bluetooth module</li> <li>● Apple/Dialog Semiconductor 338S00309 PMIC and Cirrus Logic 338S00248 audio codec and 338S00286 audio amplifier</li> <li>● Toshiba TSBL227VC3759 64 GB NAND flash storage</li> <li>● Qualcomm WTR5975 Gigabit LTE RF transceiver and PMD9655 PMIC</li> <li>● Broadcom BCM59355—Likely an iteration of BCM59350 wireless charging IC</li> </ul> </li> </ul> </div> <p data-bbox="617 1266 1465 1299">See <a href="https://www.ifixit.com/Teardown/iPhone+8+Teardown/97481">https://www.ifixit.com/Teardown/iPhone+8+Teardown/97481</a></p> <p data-bbox="617 1304 1005 1336">Apple iPhone 8 Plus memory:</p>



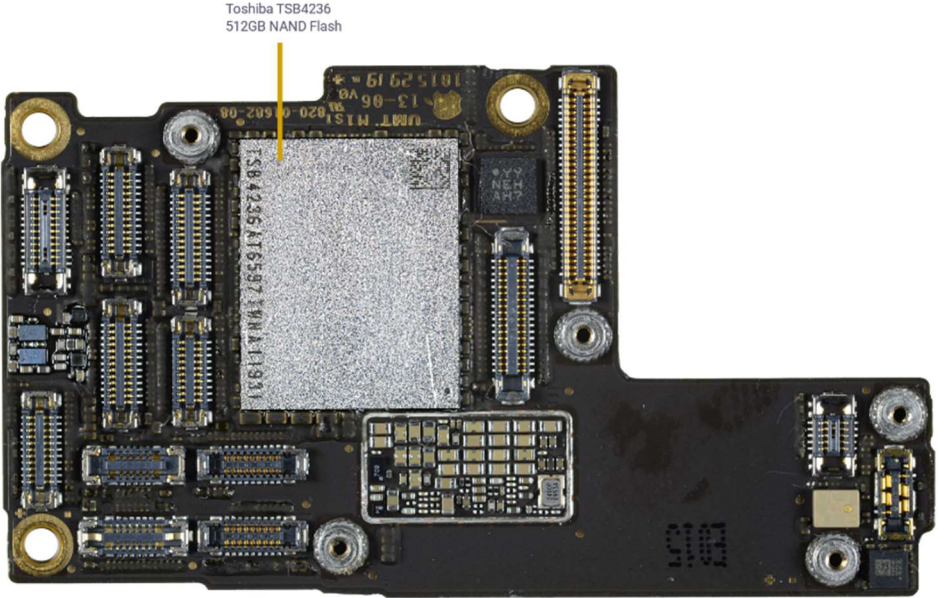
**Exhibit A – U.S. Patent 8,878,949**  
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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<div data-bbox="699 289 1371 724"> </div> <p data-bbox="619 738 1541 771">See <a href="https://www.ifixit.com/Teardown/iPhone+8+Plus+Teardown/97482">https://www.ifixit.com/Teardown/iPhone+8+Plus+Teardown/97482</a></p> <p data-bbox="619 776 949 808">Apple iPhone X memory:</p> <div data-bbox="722 857 1314 1073"> </div> <p data-bbox="619 1084 1476 1117">See <a href="https://www.ifixit.com/Teardown/iPhone+X+Teardown/98975">https://www.ifixit.com/Teardown/iPhone+X+Teardown/98975</a></p> <p data-bbox="619 1122 970 1154">Apple iPhone XR memory:</p> <div data-bbox="716 1170 1339 1312"> </div> <p data-bbox="619 1356 1512 1388">See <a href="https://www.ifixit.com/Teardown/iPhone+XR+Teardown/114123">https://www.ifixit.com/Teardown/iPhone+XR+Teardown/114123</a></p> <p data-bbox="619 1430 1136 1463">Apple iPhone XS and XS Max memory:</p> <div data-bbox="1409 264 1913 1344"> <ul style="list-style-type: none"> <li>And on the flip side, we find: <ul style="list-style-type: none"> <li>Murata 339S00399 Wi-Fi/Bluetooth module</li> <li>Apple 338S00309 power management</li> <li>Cirrus Logic 338S00248 audio codec and 338S00286 audio amplifier</li> <li>SanDisk SDMPG12 064G 64 GB NAND flash storage</li> <li>Qualcomm WTR5975 Gigabit LTE RF transceiver and PMD9655 PMIC</li> </ul> </li> <li>And on the outside of the logic board sandwich: <ul style="list-style-type: none"> <li>Toshiba TSB3234X68354TWN1 64 GB flash memory</li> <li>Apple/Cirrus Logic 338S00296 audio amplifier</li> <li>Bosch Sensortec BMP282 pressure sensor</li> <li>Bosch Sensortec gyroscope/accelerometer</li> </ul> </li> <li>Toshiba TSB3243VC0428CHNA1 64 GB flash storage</li> <li>Intel PMB9955 (likely the XMM7560 LTE Advanced Pro 4G LTE baseband processor), PMB5762 RF transceiver, and PMB5829</li> </ul> </div>

**Exhibit A – U.S. Patent 8,878,949**  
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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<div data-bbox="837 315 1268 678">  </div> <div data-bbox="1356 264 1776 690">  <ul style="list-style-type: none"> <li>• Having seen this kind of logic board <a href="#">once already</a>, we've gotten pretty good at pulling this PCB sandwich apart. Let's see what's on top of the top layer (XS on left, XS Max on right):</li> <li>• Toshiba TS83243VB5275 64 GB NAND flash storage</li> <li>• Apple/Cirrus Logic 338S00248 audio codec</li> <li>• Cypress CPD2104 USB-C port controller</li> <li>• NXP Semiconductor CBTL1612 display port multiplexer</li> </ul> </div> <p>See <a href="https://www.ifixit.com/Teardown/iPhone+XS+and+XS+Max+Teardown/113021">https://www.ifixit.com/Teardown/iPhone+XS+and+XS+Max+Teardown/113021</a>  Apple iPhone 11 memory:</p> <div data-bbox="800 781 1776 1057">  </div> <ul style="list-style-type: none"> <li>• 64 GB of onboard storage (128 GB or 256 GB optional)</li> </ul> <p>See <a href="https://www.ifixit.com/Teardown/iPhone+11+Teardown/126192">https://www.ifixit.com/Teardown/iPhone+11+Teardown/126192</a>  Apple iPhone 11 Pro memory:</p> <p><b>RAM:</b> 4GB LPDDR4</p> <p><b>Internal storage:</b> 64GB (NVMe), not expandable</p> <p>See <a href="https://www.phonearena.com/phones/Apple-iPhone-11-Pro_id11239">https://www.phonearena.com/phones/Apple-iPhone-11-Pro_id11239</a></p>

**Exhibit A – U.S. Patent 8,878,949**  
**Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR**

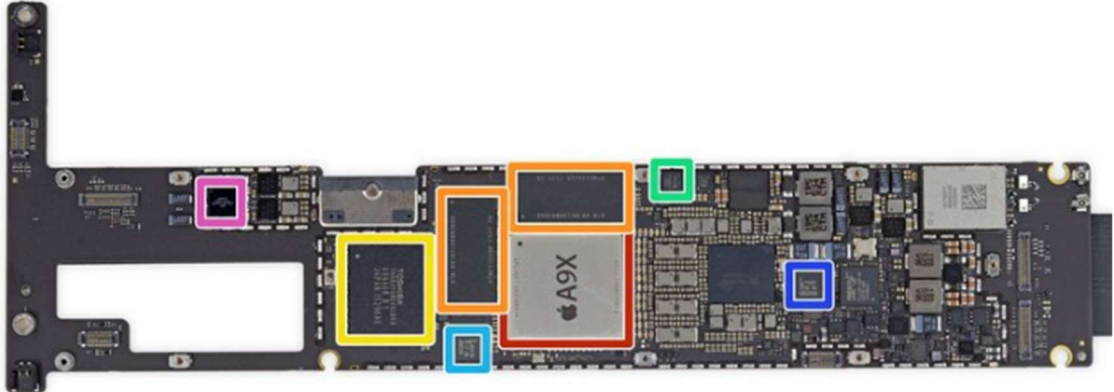

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<p>Apple iPhone 11 Pro Max memory:</p>  <p>See <a href="https://www.techinsights.com/blog/apple-iphone-11-pro-max-teardown">https://www.techinsights.com/blog/apple-iphone-11-pro-max-teardown</a></p> <p>Apple iPhone SE (2<sup>nd</sup> Generation) memory:</p>



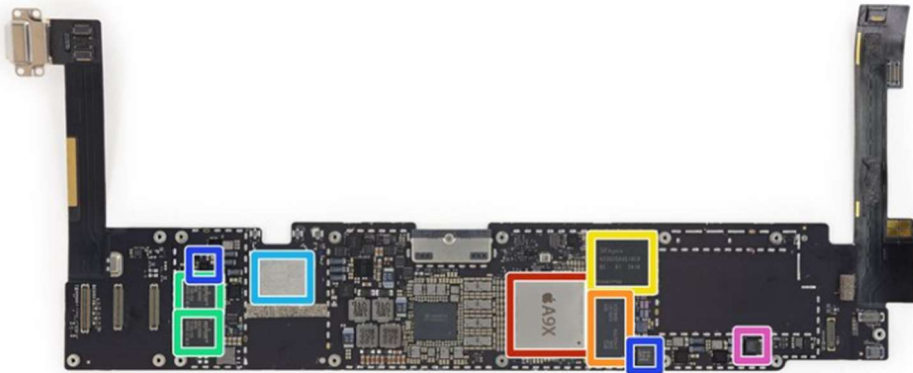
**Exhibit A – U.S. Patent 8,878,949**  
***Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR***

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<div data-bbox="688 289 1360 682"> </div> <div data-bbox="1402 264 1705 370"> </div> <div data-bbox="1402 394 1879 730"> <ul style="list-style-type: none"> <li>• And the Secondary Elements: <ul style="list-style-type: none"> <li>• Toshiba TSB4226LF23417WNA11948 64 GB flash storage</li> <li>• Apple APL1092 power management IC</li> <li>• USI 339S00648 WiFi/Bluetooth SoC</li> <li>• Broadcom 59358A81UB56 touch controller</li> <li>• Apple/Cirrus Logic 338S00295/CS35L26 Audio Amplifier</li> </ul> </li> </ul> </div> <p data-bbox="619 738 1587 776">See <a href="https://www.ifixit.com/Teardown/iPhone+SE+2020+Teardown/133066">https://www.ifixit.com/Teardown/iPhone+SE+2020+Teardown/133066</a></p> <p data-bbox="619 776 976 813">Apple iPad mini 4 memory:</p> <div data-bbox="829 844 1753 1214"> </div> <div data-bbox="934 1263 1642 1352"> <ul style="list-style-type: none"> <li>• SK Hynix H2JTDG8UD1BMR 16 GB NAND flash</li> </ul> </div> <p data-bbox="619 1372 1514 1409">See <a href="https://www.ifixit.com/Teardown/iPad+Mini+4+Teardown/48891">https://www.ifixit.com/Teardown/iPad+Mini+4+Teardown/48891</a></p> <p data-bbox="619 1409 1159 1446">Apple iPad Pro 12.9-inch (2015) memory:</p>

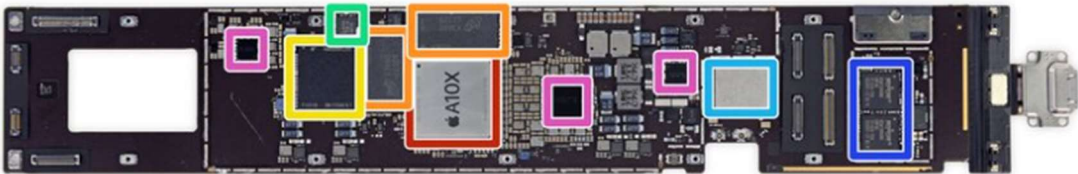
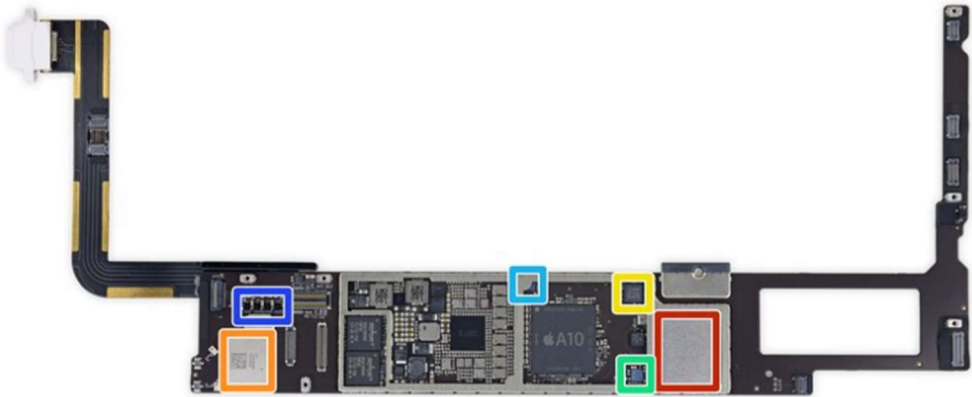
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***Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR***

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use				
	 <p align="center">● Toshiba THGBX5G8D4KLDXG 32 GB NAND Flash</p> <p>See <a href="https://www.ifixit.com/Teardown/iPad+Pro+12.9-Inch+Teardown/52599">https://www.ifixit.com/Teardown/iPad+Pro+12.9-Inch+Teardown/52599</a></p> <p>Apple iPad Pro 12.9-inch (2<sup>nd</sup> Generation) memory:</p> <table border="1"> <tr> <td>RAM:</td> <td>4GB</td> </tr> <tr> <td>Internal storage:</td> <td>64GB, not expandable</td> </tr> </table> <p>See <a href="https://www.phonearena.com/phones/Apple-iPad-Pro-12.9-inch-2018_id11033">https://www.phonearena.com/phones/Apple-iPad-Pro-12.9-inch-2018_id11033</a></p> <p>Apple iPad Pro 12.9-inch (3<sup>rd</sup> Generation) memory:</p>  <p align="center">Toshiba 64 GB Flash Storage</p> <p>See <a href="https://www.ifixit.com/Teardown/iPad+Pro+12.9-Inch+3rd+Gen+Teardown/127725">https://www.ifixit.com/Teardown/iPad+Pro+12.9-Inch+3rd+Gen+Teardown/127725</a></p>	RAM:	4GB	Internal storage:	64GB, not expandable
RAM:	4GB				
Internal storage:	64GB, not expandable				

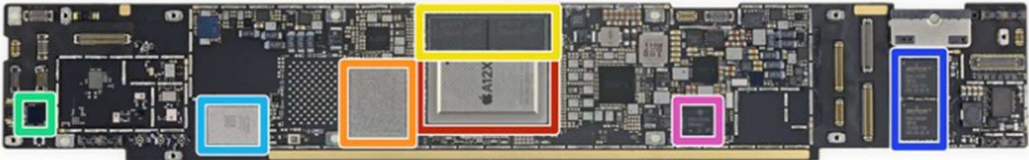
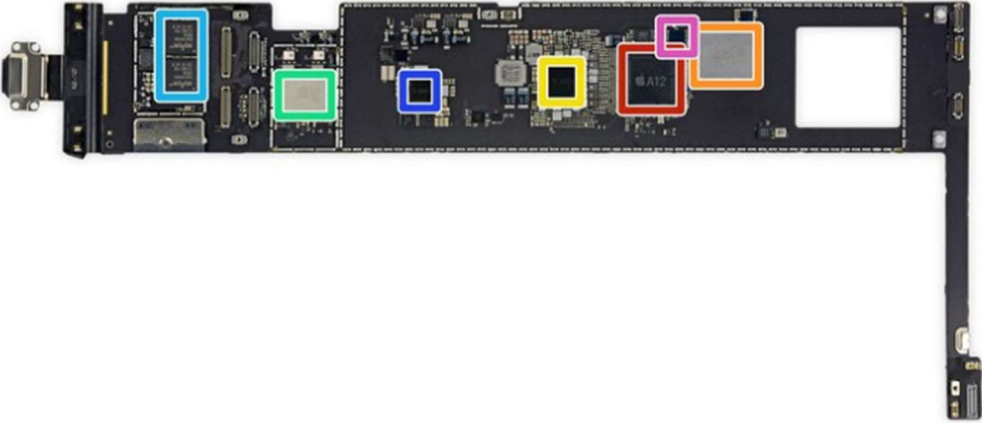
**Exhibit A – U.S. Patent 8,878,949**  
***Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR***

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use									
	<p>Apple iPad Pro 12.9-inch (4<sup>th</sup> Generation) memory:</p> <table><tr><td>RAM:</td><td>6GB LPDDR4</td></tr><tr><td>Internal storage:</td><td>128GB, not expandable</td></tr></table> <p>See <a href="https://www.phonearena.com/phones/Apple-iPad-Pro-12.9-inch-2020_id11312">https://www.phonearena.com/phones/Apple-iPad-Pro-12.9-inch-2020_id11312</a></p> <p>Apple iPad Pro 9.7-inch (2016) memory:</p> <div></div> <ul style="list-style-type: none"><li>● SK Hynix H23QEG8VG1ACR-BC 32 GB (256 Gb) NAND flash memory</li></ul> <p>See <a href="https://www.ifixit.com/Teardown/iPad+Pro+9.7-Inch+Teardown/60939">https://www.ifixit.com/Teardown/iPad+Pro+9.7-Inch+Teardown/60939</a></p> <p>Apple iPad Pro 9.7-inch (5<sup>th</sup> Generation) memory:</p> <table><tr><td rowspan="2">MEMORY</td><td>Card slot</td><td>No</td></tr><tr><td>Internal</td><td>32GB 2GB RAM, 128GB 2GB RAM</td></tr></table> <p>See <a href="https://www.gsmarena.com/apple_ipad_9_7_(2017)-8620.php">https://www.gsmarena.com/apple_ipad_9_7_(2017)-8620.php</a></p>	RAM:	6GB LPDDR4	Internal storage:	128GB, not expandable	MEMORY	Card slot	No	Internal	32GB 2GB RAM, 128GB 2GB RAM
RAM:	6GB LPDDR4									
Internal storage:	128GB, not expandable									
MEMORY	Card slot	No								
	Internal	32GB 2GB RAM, 128GB 2GB RAM								

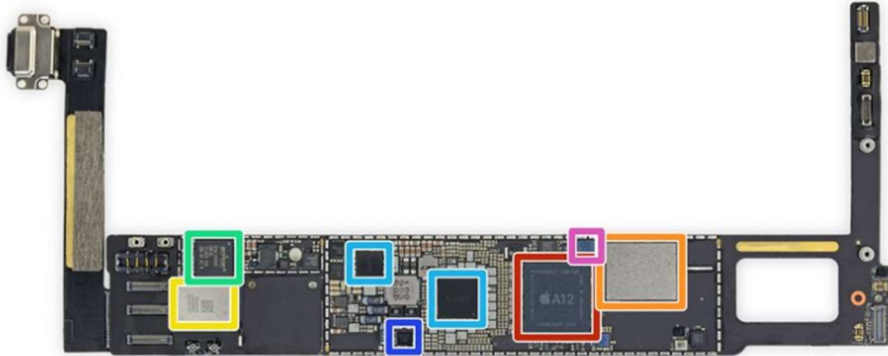
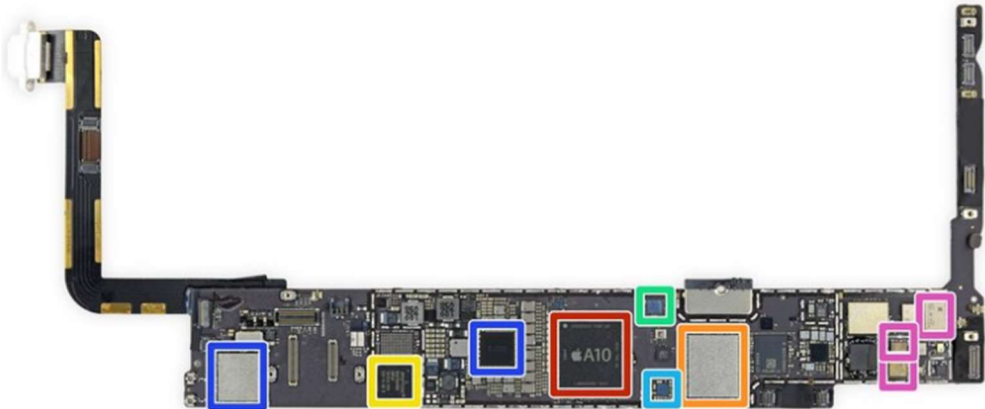
**Exhibit A – U.S. Patent 8,878,949**  
***Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR***

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<p>Apple iPad Pro 10.5-inch (2017) memory:</p>  <ul style="list-style-type: none"> <li>● Toshiba THGBX669D4LLDXG 64 GB NAND flash memory</li> </ul> <p>See <a href="https://www.ifixit.com/Teardown/iPad+Pro+10.5-Inch+Teardown/92534">https://www.ifixit.com/Teardown/iPad+Pro+10.5-Inch+Teardown/92534</a></p> <p>Apple iPad 9.7-inch (6<sup>th</sup> Generation) memory:</p>  <ul style="list-style-type: none"> <li>● Toshiba TSB3236LX3536TWNB1 32 GB flash memory</li> </ul> <p>See <a href="https://www.ifixit.com/Teardown/iPad+6+Teardown/105416">https://www.ifixit.com/Teardown/iPad+6+Teardown/105416</a></p> <p>Apple iPad Pro 11-inch (1<sup>st</sup> Generation) memory:</p>

**Exhibit A – U.S. Patent 8,878,949**  
***Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR***

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	 <ul style="list-style-type: none"> <li>● Toshiba TSB3247M61710TWNA1 flash storage (64 GB total)</li> </ul> <p>See <a href="https://www.ifixit.com/Teardown/iPad+Pro+11-Inch+Teardown/115457">https://www.ifixit.com/Teardown/iPad+Pro+11-Inch+Teardown/115457</a>  Apple iPad Pro 11-inch (2<sup>nd</sup> Generation) memory:</p> <p><b>RAM:</b> 6GB LPDDR4</p> <p><b>Internal storage:</b> 128GB, not expandable</p> <p>See <a href="https://www.phonearena.com/phones/Apple-iPad-Pro-11-inch-2020_id11380">https://www.phonearena.com/phones/Apple-iPad-Pro-11-inch-2020_id11380</a>  Apple iPad Air (3<sup>rd</sup> Generation) memory:</p>  <ul style="list-style-type: none"> <li>● Toshiba TSB3243V40755TWNA1 64 GB NAND flash</li> </ul> <p>See <a href="https://www.ifixit.com/Teardown/iPad+Air+3+Teardown/121759">https://www.ifixit.com/Teardown/iPad+Air+3+Teardown/121759</a></p>

**Exhibit A – U.S. Patent 8,878,949**  
***Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR***

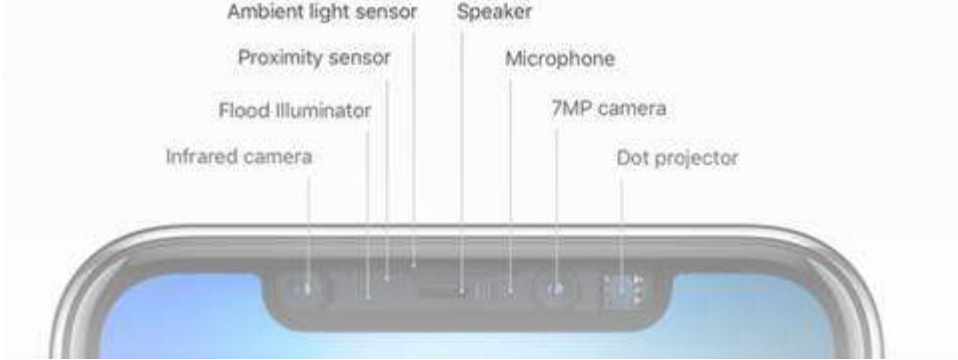

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<p>Apple iPad mini (5<sup>th</sup> Generation) memory:</p>  <p>● Toshiba TSB3243VD1190CHNA1 64 GB flash memory</p> <p>See <a href="https://www.ifixit.com/Teardown/iPad+Mini+5+Teardown/121589">https://www.ifixit.com/Teardown/iPad+Mini+5+Teardown/121589</a></p> <p>Apple iPad (7<sup>th</sup> Generation) memory:</p> 



**Exhibit A – U.S. Patent 8,878,949**  
**Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR**

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<p align="center">● SanDisk SDMRSEFJ2 032G 32 GB flash memory</p> <p>See <a href="https://www.ifixit.com/Teardown/iPad+7+Teardown/126291">https://www.ifixit.com/Teardown/iPad+7+Teardown/126291</a></p>
<p>4. The portable device of claim 1 wherein the electro-optical sensor is fixed in relation to the digital camera.</p>	<p>The electro-optical sensors of the Accused Instrumentalities are fixed in relation to the digital camera.</p> <p>Specifically, each of the Accused Instrumentalities include electro-optical sensors including, but not limited to, the Cameras and/or Sensors specified in SIC, Identification of Accused Instrumentalities, which operate as electro-optical sensor(s), and associated hardware and software. Each of the Accused Instrumentalities include a digital camera fixed in relation to the electro-optical sensor(s). See SIC, Identification of Accused Instrumentalities.</p> <p>The Accused Instrumentalities also comprise one or more cameras with one or more electro-optical sensors that use software or applications to determine a gesture. Depending on the software or application used to determine a gesture, a different electro-optical sensor and different camera may be used. Each electro-optical sensor used is fixed in relation to each digital camera used.</p> <p>One or more of the Cameras and/or Sensors, including the ambient light sensor, are located near the top of the phone screen. See <a href="https://discussions.apple.com/thread/250410751">https://discussions.apple.com/thread/250410751</a> (answering user question and stating that the ambient light sensor is located next to the front facing camera on iPhone 8 Plus); <a href="https://discussions.apple.com/thread/6999115">https://discussions.apple.com/thread/6999115</a> (user concluding that the “2 dots” above the ear piece on the front of an iPhone 6 Plus are an ambient light sensor and a proximity sensor); <a href="https://www.ifixit.com/Answers/View/601383/Ambient+Light+Sensor+Filter+Replacement">https://www.ifixit.com/Answers/View/601383/Ambient+Light+Sensor+Filter+Replacement</a> (user claiming that the top of iPhone 6/6S/7/and 8 contain an ambient light sensor and a proximity sensor).</p>

**Exhibit A – U.S. Patent 8,878,949**  
***Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR***



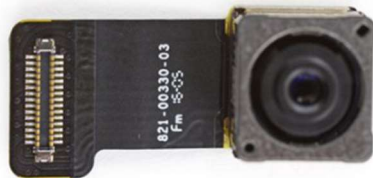
U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	 <p><a href="https://www.quora.com/Does-a-light-always-blink-on-an-iPhone-X-near-the-front-facing-camera-I-saw-it-on-a-YouTube-video">https://www.quora.com/Does-a-light-always-blink-on-an-iPhone-X-near-the-front-facing-camera-I-saw-it-on-a-YouTube-video</a>.</p> <p>Apple iPhone 6s display-side sensor is fixed in relation to the camera:</p>  <p>Apple iPhone 6s non-display-side sensor is fixed in relation to the camera:</p>



**Exhibit A – U.S. Patent 8,878,949**  
**Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR**

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<div data-bbox="945 308 1627 581" data-label="Image"> </div> <p data-bbox="619 609 1575 678">See <a href="https://www.ifixit.com/Teardown/iPhone+6s+Teardown/48170">https://www.ifixit.com/Teardown/iPhone+6s+Teardown/48170</a>  Apple iPhone 6s Plus display-side sensor is fixed in relation to the camera:</p> <div data-bbox="951 678 1522 946" data-label="Image"> </div> <div data-bbox="982 963 1617 1317" data-label="Image"> </div> <p data-bbox="619 1320 1631 1352">Apple iPhone 6s Plus non-display-side sensor is fixed in relation to the camera:</p>



**Exhibit A – U.S. Patent 8,878,949**  
***Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR***

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<div data-bbox="945 324 1617 584">  </div> <p data-bbox="619 641 1554 673">See <a href="https://www.ifixit.com/Teardown/iPhone+6s+Plus+Teardown/48171">https://www.ifixit.com/Teardown/iPhone+6s+Plus+Teardown/48171</a></p> <p data-bbox="619 678 1522 711">Apple iPhone SE display-side sensor is fixed in relation to the camera:</p> <div data-bbox="856 743 1705 880">  </div> <p data-bbox="619 950 1579 982">Apple iPhone SE non-display-side sensor is fixed in relation to the camera:</p> <div data-bbox="1100 1006 1470 1182">  </div> <p data-bbox="619 1201 1491 1234">See <a href="https://www.ifixit.com/Teardown/iPhone+SE+Teardown/60902">https://www.ifixit.com/Teardown/iPhone+SE+Teardown/60902</a></p> <p data-bbox="619 1239 1501 1271">Apple iPhone 7 display-side sensor is fixed in relation to the camera:</p>

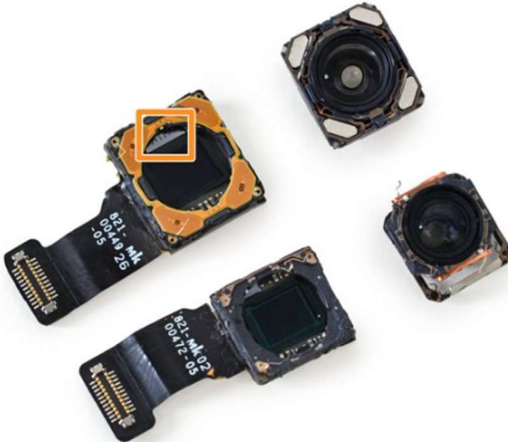

**Exhibit A – U.S. Patent 8,878,949**  
**Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR**

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	 <p>Apple iPhone 7 non-display-side sensor is fixed in relation to the camera:</p>  <p>See <a href="https://www.ifixit.com/Teardown/iPhone+7+Teardown/67382">https://www.ifixit.com/Teardown/iPhone+7+Teardown/67382</a></p> <p>Apple iPhone 7 Plus display-side sensor is fixed in relation to the camera:</p>



**Exhibit A – U.S. Patent 8,878,949**  
**Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR**

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	 <p data-bbox="619 764 1619 800">Apple iPhone 7 Plus non-display-side sensor is fixed in relation to the camera:</p> 


**Exhibit A – U.S. Patent 8,878,949**  
***Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR***

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	 <p>See <a href="https://www.ifixit.com/Teardown/iPhone+7+Plus+Teardown/67384">https://www.ifixit.com/Teardown/iPhone+7+Plus+Teardown/67384</a>          Apple iPhone 8 display-side sensor is fixed in relation to the camera:</p>  <p>Apple iPhone 8 non-display-side sensor is fixed in relation to the camera:</p>

**Exhibit A – U.S. Patent 8,878,949**  
**Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR**

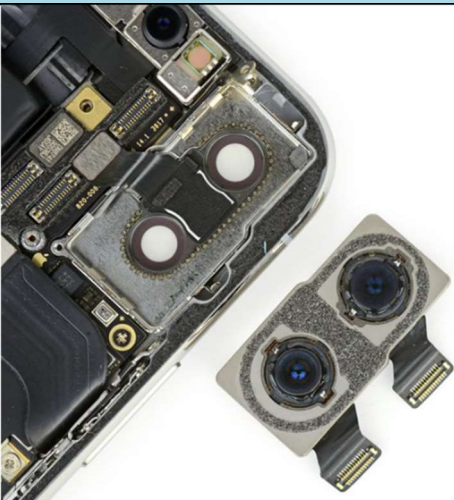

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	 <p>See <a href="https://www.ifixit.com/Teardown/iPhone+8+Teardown/97481">https://www.ifixit.com/Teardown/iPhone+8+Teardown/97481</a>          Apple iPhone 8 Plus display-side sensor is fixed in relation to the camera:</p>  <p>Apple iPhone 8 Plus non-display-side sensor is fixed in relation to the camera:</p> 

**Exhibit A – U.S. Patent 8,878,949**  
***Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR***

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<p>See <a href="https://www.ifixit.com/Teardown/iPhone+8+Plus+Teardown/97482">https://www.ifixit.com/Teardown/iPhone+8+Plus+Teardown/97482</a></p> <p>Apple iPhone X display-side sensor is fixed in relation to the camera:</p>  <p>Apple iPhone X non-display-side sensor is fixed in relation to the camera:</p> <div data-bbox="1352 363 1877 412"> </div> <ul style="list-style-type: none"> <li>● We turn our attention to the top of the phone to find the much anticipated <a href="#">mini Kinect TrueDepth</a> camera system! This system rallies a team of sensors to bring facial recognition to the X.</li> <li>● Step one in this system: the flood illuminator embedded in the display blasts your face with infrared (IR) light.</li> <li>● Next, the front-facing camera, marked in red, confirms the presence of a face.</li> <li>● Then the IR dot projector, far right, projects a grid of dots over your face to <a href="#">create a three-dimensional map</a>.</li> <li>● Finally, the IR camera on the left reads this map, and sends the data to the phone.</li> </ul>



**Exhibit A – U.S. Patent 8,878,949**  
**Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR**


U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	 <p>See <a href="https://www.ifixit.com/Teardown/iPhone+X+Teardown/98975">https://www.ifixit.com/Teardown/iPhone+X+Teardown/98975</a></p> <p>Apple iPhone XR display-side sensor is fixed in relation to the camera:</p>  <p>Apple iPhone XR non-display-side sensor is fixed in relation to the camera:</p>




**Exhibit A – U.S. Patent 8,878,949**  
**Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR**

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<div data-bbox="951 305 1598 683" data-label="Image"> </div> <p data-bbox="619 711 1514 743">See <a href="https://www.ifixit.com/Teardown/iPhone+XR+Teardown/114123">https://www.ifixit.com/Teardown/iPhone+XR+Teardown/114123</a></p> <p data-bbox="619 771 1692 803">Apple iPhone XS and XS Max display-side sensor is fixed in relation to the camera:</p> <div data-bbox="869 873 1346 1068" data-label="Image"> </div> <ul data-bbox="1367 816 1724 1060" style="list-style-type: none"> <li>• What was revolutionary <a href="#">last year</a> is quickly becoming standard equipment—both the XS and the XS Max come equipped with a sensor array for Apple's <a href="#">fancy Face ID</a> technology.</li> <li>• Time to fish out the noisemakers! The Taptic engine and loudspeaker come out in an assembly, but easily separate for modular replacement.</li> <li>④ The XS Max features a slightly beefier set of feedback units, but both Taptic engines follow the <a href="#">same designs of yore</a>.</li> </ul> <p data-bbox="619 1109 1751 1141">Apple iPhone XS and XS Max non-display-side sensor is fixed in relation to the camera:</p>

**Exhibit A – U.S. Patent 8,878,949**  
**Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR**

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	 <p>See <a href="https://www.ifixit.com/Teardown/iPhone+XS+and+XS+Max+Teardown/113021">https://www.ifixit.com/Teardown/iPhone+XS+and+XS+Max+Teardown/113021</a>          Apple iPhone 11 display-side sensor is fixed in relation to the camera:</p>

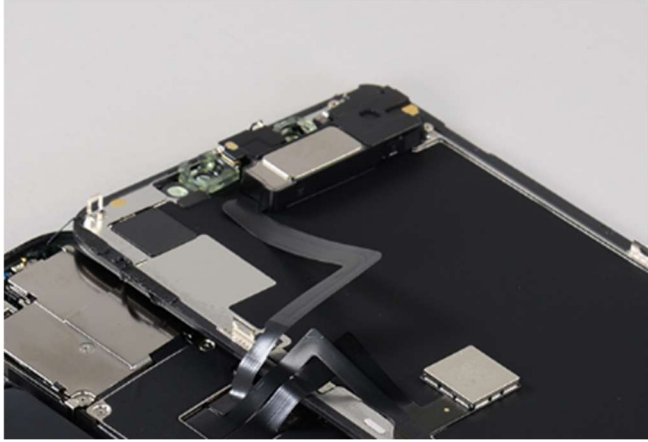

**Exhibit A – U.S. Patent 8,878,949**  
**Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR**

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	 <p data-bbox="621 654 1575 686">Apple iPhone 11 non-display-side sensor is fixed in relation to the camera:</p> <p data-bbox="621 1159 1499 1192">See <a href="https://www.ifixit.com/Teardown/iPhone+11+Teardown/126192">https://www.ifixit.com/Teardown/iPhone+11+Teardown/126192</a></p> <p data-bbox="621 1222 1566 1255">Apple iPhone 11 Pro display-side sensor is fixed in relation to the camera:</p>



**Exhibit A – U.S. Patent 8,878,949**  
***Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR***

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	 <p>See <a href="https://www.ifixit.com/Teardown/iPhone+11+Pro+Teardown/129687">https://www.ifixit.com/Teardown/iPhone+11+Pro+Teardown/129687</a>          Apple iPhone 11 Pro non-display-side sensor is fixed in relation to the camera:</p>  <p>See <a href="https://www.ifixit.com/products/iphone-11-pro-and-pro-max-rear-camera">https://www.ifixit.com/products/iphone-11-pro-and-pro-max-rear-camera</a>          Apple iPhone 11 Pro Max display-side sensor is fixed in relation to the camera:</p>

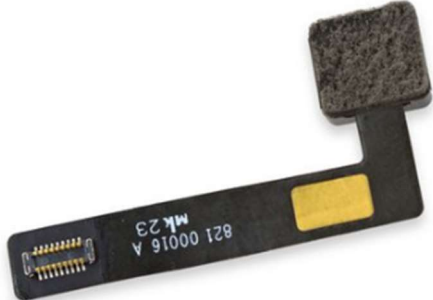


**Exhibit A – U.S. Patent 8,878,949**  
**Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR**

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	 <p>Apple iPhone 11 Pro Max non-display-side sensor is fixed in relation to the camera:</p>  <p>See <a href="https://www.techinsights.com/blog/apple-iphone-11-pro-max-teardown">https://www.techinsights.com/blog/apple-iphone-11-pro-max-teardown</a></p> <p>Apple iPhone SE (2<sup>nd</sup> Generation) display-side sensor is fixed in relation to the camera:</p>

**Exhibit A – U.S. Patent 8,878,949**  
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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	 <p>Apple iPhone SE (2<sup>nd</sup> Generation) non-display-side sensor is fixed in relation to the camera:</p>  <p>See <a href="https://www.ifixit.com/Teardown/iPhone+SE+2020+Teardown/133066">https://www.ifixit.com/Teardown/iPhone+SE+2020+Teardown/133066</a></p> <p>Apple iPad mini 4 display-side sensor is fixed in relation to the camera:</p> 

**Exhibit A – U.S. Patent 8,878,949**  
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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	 <p>Apple iPad mini 4 non-display-side sensor is fixed in relation to the camera:</p>  <p>See <a href="https://www.ifixit.com/Teardown/iPad+Mini+4+Teardown/48891">https://www.ifixit.com/Teardown/iPad+Mini+4+Teardown/48891</a>          Apple iPad Pro 12.9-inch (2015) display-side sensor is fixed in relation to the camera:</p>  <p>Apple iPad Pro 12.9-inch (2015) non-display-side sensor is fixed in relation to the camera:</p>



**Exhibit A – U.S. Patent 8,878,949**  
***Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR***

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<div data-bbox="1159 293 1394 548" data-label="Image"> </div> <p data-bbox="619 553 1839 623">See <a href="https://www.ifixit.com/Teardown/iPad+Pro+12.9-Inch+Teardown/52599">https://www.ifixit.com/Teardown/iPad+Pro+12.9-Inch+Teardown/52599</a>  Apple iPad Pro 12.9-inch (2<sup>nd</sup> Generation) display-side sensor is fixed in relation to the camera:</p> <div data-bbox="1096 623 1472 852" data-label="Image"> </div> <p data-bbox="619 857 1898 893">Apple iPad Pro 12.9-inch (2<sup>nd</sup> Generation) non-display-side sensor is fixed in relation to the camera:</p> <div data-bbox="959 889 1608 1208" data-label="Image"> </div> <p data-bbox="619 1213 1955 1282">See <a href="https://arstechnica.com/gadgets/2020/03/ipad-pro-teardown-basically-finds-2018s-ipad-with-a-lidar-sensor/">https://arstechnica.com/gadgets/2020/03/ipad-pro-teardown-basically-finds-2018s-ipad-with-a-lidar-sensor/</a></p> <p data-bbox="619 1312 1835 1347">Apple iPad Pro 12.9-inch (3<sup>rd</sup> Generation) display-side sensor is fixed in relation to the camera:</p>



**Exhibit A – U.S. Patent 8,878,949**  
**Gesture Technology Partners, LLC v. Apple, Inc., Cause No. 4:22-cv-04806-YGR**

U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<div data-bbox="997 267 1585 519" data-label="Image"> </div> <p data-bbox="619 522 1896 557">Apple iPad Pro 12.9-inch (3<sup>rd</sup> Generation) non-display-side sensor is fixed in relation to the camera:</p> <div data-bbox="1161 557 1421 852" data-label="Image"> </div> <p data-bbox="619 855 1755 889">See <a href="https://www.ifixit.com/Teardown/iPad+Pro+12.9-Inch+3rd+Gen+Teardown/127725">https://www.ifixit.com/Teardown/iPad+Pro+12.9-Inch+3rd+Gen+Teardown/127725</a></p> <p data-bbox="619 917 1837 951">Apple iPad Pro 12.9-inch (4<sup>th</sup> Generation) display-side sensor is fixed in relation to the camera:</p> <div data-bbox="1161 987 1421 1172" data-label="Image"> </div> <p data-bbox="619 1175 1180 1209">See <a href="https://support.apple.com/en-us/111977">https://support.apple.com/en-us/111977</a></p> <p data-bbox="619 1213 1896 1247">Apple iPad Pro 12.9-inch (4<sup>th</sup> Generation) non-display-side sensor is fixed in relation to the camera:</p> <div data-bbox="1224 1263 1375 1409" data-label="Image"> </div> <p data-bbox="619 1412 1180 1446">See <a href="https://support.apple.com/en-us/111977">https://support.apple.com/en-us/111977</a></p> <p data-bbox="619 1450 1701 1484">Apple iPad Pro 9.7-inch (2016) display-side sensor is fixed in relation to the camera:</p>

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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<div data-bbox="1102 284 1459 617" data-label="Image"> </div> <p data-bbox="619 625 1764 657">Apple iPad Pro 9.7-inch (2016) non-display-side sensor is fixed in relation to the camera:</p> <div data-bbox="1050 682 1501 868" data-label="Image"> </div> <p data-bbox="619 885 1585 917">See <a href="https://www.ifixit.com/Teardown/iPad+Pro+9.7-Inch+Teardown/60939">https://www.ifixit.com/Teardown/iPad+Pro+9.7-Inch+Teardown/60939</a></p> <p data-bbox="619 925 1816 958">Apple iPad Pro 9.7-inch (5<sup>th</sup> Generation) display-side sensor is fixed in relation to the camera:</p> <div data-bbox="1113 982 1459 1234" data-label="Image"> </div> <p data-bbox="619 1242 1900 1307">See <a href="https://www.idownloadblog.com/2017/03/30/teardown-analysis-finds-apples-new-9-7-ipad-is-a-repackaged-ipad-air-with-a-few-differences/">https://www.idownloadblog.com/2017/03/30/teardown-analysis-finds-apples-new-9-7-ipad-is-a-repackaged-ipad-air-with-a-few-differences/</a></p> <p data-bbox="619 1347 1879 1380">Apple iPad Pro 9.7-inch (5<sup>th</sup> Generation) non-display-side sensor is fixed in relation to the camera:</p>

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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	 <p>See <a href="https://www.idownloadblog.com/2017/03/30/teardown-analysis-finds-apples-new-9-7-ipad-is-a-repackaged-ipad-air-with-a-few-differences/">https://www.idownloadblog.com/2017/03/30/teardown-analysis-finds-apples-new-9-7-ipad-is-a-repackaged-ipad-air-with-a-few-differences/</a>  Apple iPad Pro 10.5-inch (2017) display-side sensor is fixed in relation to the camera:</p>  <p>Apple iPad Pro 10.5-inch (2017) non-display-side sensor is fixed in relation to the camera:</p>  <p>See <a href="https://www.ifixit.com/Teardown/iPad+Pro+10.5-Inch+Teardown/92534">https://www.ifixit.com/Teardown/iPad+Pro+10.5-Inch+Teardown/92534</a>  Apple iPad 9.7-inch (6<sup>th</sup> Generation) display-side sensor is fixed in relation to the camera:</p>

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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<div data-bbox="1100 337 1478 521" data-label="Image"> </div> <p data-bbox="961 529 1646 613">+ 1.2-megapixel 720p front-facing FaceTime HD camera</p> <p data-bbox="621 626 1827 662">Apple iPad 9.7-inch (6<sup>th</sup> Generation) non-display-side sensor is fixed in relation to the camera:</p> <div data-bbox="1024 678 1602 878" data-label="Image"> </div> <ul style="list-style-type: none"> <li data-bbox="627 894 1377 935">● 8-megapixel 1080p rear-facing iSight camera</li> </ul> <p data-bbox="621 943 1453 979">See <a href="https://www.ifixit.com/Teardown/iPad+6+Teardown/105416">https://www.ifixit.com/Teardown/iPad+6+Teardown/105416</a></p> <p data-bbox="621 980 1810 1016">Apple iPad Pro 11-inch (1<sup>st</sup> Generation) display-side sensor is fixed in relation to the camera:</p> <div data-bbox="1094 1040 1486 1203" data-label="Image"> </div> <div data-bbox="1085 1230 1495 1446" data-label="Image"> </div>

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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<div data-bbox="1012 269 1562 555" data-label="Image"> </div> <p data-bbox="619 557 1871 592">Apple iPad Pro 11-inch (1<sup>st</sup> Generation) non-display-side sensor is fixed in relation to the camera:</p> <div data-bbox="1163 607 1415 831" data-label="Image"> </div> <div data-bbox="1199 847 1415 1114" data-label="Image"> </div> <p data-bbox="619 1133 1818 1206">See <a href="https://www.ifixit.com/Teardown/iPad+Pro+11-Inch+Teardown/115457">https://www.ifixit.com/Teardown/iPad+Pro+11-Inch+Teardown/115457</a>          Apple iPad Pro 11-inch (2<sup>nd</sup> Generation) display-side sensor is fixed in relation to the camera:</p>



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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<div data-bbox="856 305 1717 557" data-label="Image"> </div> <p data-bbox="619 557 1453 626">See <a href="https://www.ifixit.com/Guide/iPad+Pro+11-Inch+2nd+Gen+Front+Camera+Assembly+Replacement/153825">https://www.ifixit.com/Guide/iPad+Pro+11-Inch+2nd+Gen+Front+Camera+Assembly+Replacement/153825</a></p> <p data-bbox="619 662 1877 703">Apple iPad Pro 11-inch (2<sup>nd</sup> Generation) non-display-side sensor is fixed in relation to the camera:</p> <div data-bbox="1129 703 1444 987" data-label="Image"> </div> <p data-bbox="619 987 1661 1027">See <a href="https://www.phonearena.com/phones/Apple-iPad-Pro-11-inch-2020_id11380">https://www.phonearena.com/phones/Apple-iPad-Pro-11-inch-2020_id11380</a></p> <p data-bbox="619 1027 1707 1068">Apple iPad Air (3<sup>rd</sup> Generation) display-side sensor is fixed in relation to the camera:</p> <div data-bbox="1161 1097 1417 1284" data-label="Image"> </div> <p data-bbox="619 1320 1766 1360">Apple iPad Air (3<sup>rd</sup> Generation) non-display-side sensor is fixed in relation to the camera:</p>

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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<div data-bbox="1142 293 1394 532" data-label="Image"> </div> <p data-bbox="621 532 1514 570">See <a href="https://www.ifixit.com/Teardown/iPad+Air+3+Teardown/121759">https://www.ifixit.com/Teardown/iPad+Air+3+Teardown/121759</a></p> <p data-bbox="621 594 1722 631">Apple iPad mini (5<sup>th</sup> Generation) display-side sensor is fixed in relation to the camera:</p> <div data-bbox="1129 657 1451 868" data-label="Image"> </div> <p data-bbox="621 868 1780 906">Apple iPad mini (5<sup>th</sup> Generation) non-display-side sensor is fixed in relation to the camera:</p> <div data-bbox="1098 959 1440 1198" data-label="Image"> </div> <p data-bbox="621 1198 1533 1235">See <a href="https://www.ifixit.com/Teardown/iPad+Mini+5+Teardown/121589">https://www.ifixit.com/Teardown/iPad+Mini+5+Teardown/121589</a></p> <p data-bbox="621 1235 1654 1273">Apple iPad (7<sup>th</sup> Generation) display-side sensor is fixed in relation to the camera:</p>

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U.S. Patent No. 8,878,949 Claim Elements	Evidence of Use
	<div data-bbox="1110 264 1467 501"></div> <p data-bbox="621 540 1713 578">Apple iPad (7<sup>th</sup> Generation) non-display-side sensor is fixed in relation to the camera:</p> <div data-bbox="1127 612 1421 898"></div> <p data-bbox="621 906 1451 943">See <a href="https://www.ifixit.com/Teardown/iPad+7+Teardown/126291">https://www.ifixit.com/Teardown/iPad+7+Teardown/126291</a></p>